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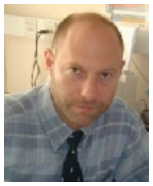

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The titles and contact authors of submitted papers that have been reviewed and accepted (or accepted with minor revisions) for IMECS 2015 are listed here:

A_C, D_N, O_Others

Titles (A_C)	Contact Authors
A Behavior Approach to Instant Messaging Worm Detection	Dr. hanxun zhou
A Business Architecture Capability Meta Model and Tool-set for Providing Function Point Estimation for Enterprise Architecture Management	Mr. Francois du Toit
A Cell-centered Scheme for Solving Anisotropic Diffusion Equations on Skewed Meshes	Dr. Lina Chang
A Closed-Loop High-Gain Multiphase-Switched-Capacitor-Inductor Step-Up DC-DC Converter	Prof. Yuen-Haw Chang
A Closed-Loop High-Gain Switched-Capacitor-Inductor-Based Boost DC-AC Inverter	Prof. Yuen-Haw Chang
A Cloud-based Wireless Mesh Network with Adaptive Data Storage Functions	Mr. Shengtao YANG
A Comparative Study of Analysing Transformed and Noisy Data in Taguchi Orthogonal Arrays	Mr. Nattapat Imsap
A Comparative Study on CT Image Segmentation Using FCM-based Clustering Methods	Prof. Chih-Hung Wu
A Comparison of Biomass Gasification Technologies using Data Envelopment Analysis	Dr. Choosak Pornsing
A Comprehensive Review on Long Term Evolution (LTE)-Advanced	Dr. Prashant Pandey
A Decision Support Application for Teak Log Supplier to Simulate Scenarios of Utilizing Forest Resources by Considering the Sustainability of Teak Log Supply	Mr. Silvester Adi Surya Herjuna
A Graphical User Identifier Suggestion Function Scheme Using Sketching for Mobile Web-Services	Mr. Yusuke Matsuno
A Method for Identifying Photo Composition of the Panoramic Image	Mr. Shin Yen Te
A Method for Investigation and Analyzing of Software Product Line Ecosystems	Dr. Abbas ramazani fard
A Network-Based Scalability Model for Distributed Real-Time Resource Management	Prof. Sergei Gorlatch
A New AM Demodulation Scheme with a Blind Carrier Recovery Method	Prof. Jeerasuda Koseeyaporn
A New Method Based on Tree Simplification and Schema Matching for Automatic Web Result Extraction and Matching	Mr. Yasar Gozudeli
A New Method for Marshaling of Freight Train with Generalization Capability Based on the Processing Time	Dr. Yoichi Hirashima
A New ONU-initiated Doze Mode Energy-saving Mechanism in EPON	Prof. I-Shyan Hwang
A Novel Approach for Classification of Congestive Heart Failure Using Relatively Short-term ECG Waveforms and SVM Classifier	Mr. Ken Ying-Kai Liao
A Novel Centralized Control Implementation For Identity-Location-Separated Network Architecture	Mr. Chaoqi Yu
A Novel Methodology for Test Scenario Generation Based on Control Flow Analysis of UML 2.x Sequence Diagrams	Mr. Saroj Kanta Misra
A Novel Symmetric Cryptography Algorithm for Fast and Secure Encryption	Dr. Aswathy A S
A Numerical Scheme for the Black-Scholes Equation with Variable Interest Rate Using Spectral Collocation and Backward-Differences	Dr. Roden Jason David, Ms. Fernandina Ko
A Parallel Minimum Attribute Co-reduction Accelerator based on Quantum-inspired SFLA and MapReduce Framework	Dr. Weiping Ding
A PC-Based Controller for the Computer Numerically-Controlled (CNC) LASER Machine	Mr. Jayson Rogelio
A PLC-Based Adaptive Control of Superheated Steam Treatment System (SSTS) for Stabilized Brown Rice (SBR)	Dr. Dominic Guevarra
A Practical Study of Exact-BASIC Codes at the MSR Point in Distributed Storage Systems	Miss Yumeng Zhang
A Proposal of Graph-based Blank Element Selection Algorithm for Java Programming Learning with Fill-in-Blank Problems	Prof. Nobuo Funabiki
A Python Class for Higher-Dimensional Schrodinger Equations	Dr. Amna Noreen
A report on Returns to Scale in UAE Banks	Dr. Aqila
A Research on the Feasibility of Supplying Wind Power for Industrial-Park at Feeding	Prof. Zulati Litifu

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A Secure Mobile Payment Framework Based On Face Authentication	Mr. Zhaomiao Xu
A Source Code and Test Cases Impact Analysis Tool for Database Schema Changes	Mr. Chanwit Sriarpanon
A Standalone Near Filed Communication Based Library Automation System	Prof. Amol D. Potgantwar
A Study an Impact of Daylight with Period Time on Illuminance and Uniformity for Building	Dr. Chaiyan Jettanasen
A Systematic Approach for Configuration Management in Software Product Lines	Dr. K.L.S.Soujanya
Adaptive Delay Constraint Admission Control with Hierarchical DBA over GPON-LTE Converged Network	Prof. I-Shyan Hwang
Adaptive Feedforward Cancellation (AFC) in Sound Fields: Computer-Based Approach for Active Noise Control (ANC)	Mr. Suparoek Junsupasen
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Air Conditioning Control System Learning Sensory Scale Based on Reinforcement Learning	Dr. Noritaka Shigei
Algorithms for Optimization of Convex Quadratic Functions	Miss BELABBACI Amel
An Agri-food Supply Chain Model for Cultivating the Capabilities of Farmers in Accessing Capital Using Corporate Social Responsibility Program	Mr. Rillo S Wahyudin
AN AUTOMATED TOOL FOR A NON-CONTACT, REAL TIME EARLY DETECTION OF DIABETES BY COMPUTER VISION	Dr. Jamal firmat banzi
An Efficient Implementation of Multi-Context Algebraic Reasoning System with Lazy Evaluation	Prof. Masahito Kurihara, Mr. ChengCheng Ji
An Empirical Research into the Effect of Blended Learning on English Writing Learning in Institutions of Higher Vocational Education	Dr. Mingyong Zhang
An Experimental Setup Investigation to Study Characteristics of Fault on Transmission System	Dr. Chaiyan Jettanasen
An Exploratory Study in Displaying Interactive Car Catalogue System on Multi-Touch Tabletop	Mr. Ahsanullah Abro
An Exploratory Study: an Integrated Approach for Design for Testability	Dr. Megha Joshi
An Extended HDL SoC TAB-model for Diagnosability and Repair	Dr. Woon Kian Chong
An FLP Model for Optimizing Supply Chain Management in Steel Company	Dr. Mansur Hassan
An Image Size Invariant Method for Quick Detection of Dissimilar Binary Images	Dr. Adnan Mustafa
An Improved Collaborative Filtering Recommendation Algorithm Combining Item Clustering and Slope One Scheme	Dr. Haipeng You
AN INTEGRATED SWITCHING TECHNIQUE FOR MINIMIZING POWER CONSUMPTION USING DOMINO LOGIC SYSTEM	Dr. Naveenkumar D
An Investigation of Residual Stress Gradient Effects in FIB-DIC Micro-Ring-Core Analysis	Dr. Alexander M. Korsunsky
An IT Driven Approach for Global Production Network Design	Mr. Carlo Hausberg
An Iterative Algorithm for Generalized Mixed Equilibria with Variational Inequalities	Prof. Ching-Feng Wen
An Optical Tunable Fiber Filter based on The Concatenated Single-mode Optical Fibers with Different Cut-off Wavelengths	Miss Wanvisa Talataisong
Analysis of Refraction Phenomenon on Green's Function with The Two Product of Gaussian-PDFs	Dr. Atirat Maksuwan
Analysis of Vehicle Tracking Maps in Iwate Prefecture Following the 2011 Tohoku Earthquake	Prof. Noriaki Endo
AOS: Adaptive Out-of-order Scheduling for Write-caused Interference Reduction in Solid State Disks	Dr. Pingguo Li
Application of Differential Evolution to Parameter Identification of Bhumibol Hydro Power Plant in Thailand	Dr. Jukkrit Kluabwang
Application of Language Modelling in Sentiment Analysis for Faculty Comment Evaluation	Mrs. Ria Sagum
Application of YIQ Color Model for Color Pattern Recognition with Shifted and Rotated Training Images in Optoelectronic Correlator	Dr. Chulung Chen
Applying Classifier Algorithms to Organizational Memory to Build an Attrition Predictor Model	Dr. K.M. Suceendran
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Architectural Design for Allocation, Storage and Retrieval of Distributed Multimedia Data	Mrs. Nithya Deenadayalan
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Automated Translation of Java Control Flow into Promela	Miss Jirapat Lueangviriyayarn
Automatic Detection of Diabetic Retinopathy from Eye Fundus Images: A Review	Mr. Manpreet Kaur Sidhu
Band Mapped and Distributed Energy Best Tree Encoding Features for Tri-Phone-Based Automatic Speech Recognition	Mr. Sayed Zaky
Big Data Technology Adoption in Chinese Small and Medium-sized Enterprises	Dr. Woon Kian Chong
Block-diagonal preconditioner for Darcy equations with random coe cient	Dr. Adel Al-Mahdi
Business Analytics in Tourism, Exploring Event, Industry, and Brand Potentials	Dr. William Claster
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Characteristics and Behaviour of Transient Current during Lightning Strikes on Transmission Tower	Dr. Chaiyan Jettanasen
Classifications of Emotion Expressed by Filipinos through Tweets	Mr. Miguel Angelo Tolentino, Mr. Michael Jr. Pippin
Cloud computing: A new era of IT opportunity and challenges	Dr. G. Harsha Vardhan
Commercialization Strategy Formulation for University Spin-Off: A Case Study	Mr. Aam Hamid Al Ghabid
Common Design Elements and Strategies in Participatory Safety Sign Redesign among Construction Workers	Dr. Alan H.S. Chan
Compact S-box Hardware Implementation with an Efficient MVP-CSE Algorithm	Mr. Xiaoqiang ZHANG
Comparatative Performance Analysis of Modified Filter Bank MultiCarrier Prototype Filter Under Strategic Conditions	Dr. Er.A.S.Kang
Comparison Analysis Study in to Palm Print Image Acquisition Methods	Dr. K.Mariyappan
Comparison between Two HLL-type Riemann Solvers for Strong Shock Calculation on ALE Framework	Prof. Zhijun Shen
Comparison of Efficient parallel Index Algorithms used for RDF data store	Dr. Rajani Sharma
Comprehensive Curriculum of Programming for Engineers, its Teaching Models and in-Lab Monitoring Technique	Mr. Mohit Nitin Satoskar
Computer Ergonomic And Its Effects On Students' Interest in Computer Programming	Dr. Yekini Nureni Asafe
Corrective Controllers with Switching Capability for Modeling Matching of Input/State Asynchronous Machines	Prof. Jung Min Yang
Cross-Layer Design of Power Assignment and Power Balance in Wireless Ad-hoc Networks	Mrs. Arivoli Vijay
Cultivation and Characterization of Microalgae for Wastewater Treatment	Dr. Ahmed AL.Darmaki

The titles and contact authors of submitted papers that have been reviewed and accepted (or accepted with minor revisions) for IMECS 2015 are listed here:

A_C, D_N, O_Others

Titles (D_N)	Contact Authors
Data Network Threats and Penetration Testing	Dr. Vladimir Sanchez Padilla
DePAT: A Framework for Specification-Based Automatic Test Generation	Dr. Simona Vasilache
Deregulation of Electric Power in a Developing Economy: Prospects for Nigeria	Dr. Nnoli Kosisochukwu Pal
Design by Analysis versus Design by Formula of a PWR Reactor Pressure Vessel	Mr. Usman Tariq Murtaza
Design of Beidou satellite timing and communication system for power fault location system with traveling wave	Mr. HUANG Long
Design of Channel Filter based on Asymmetric One-Dimensional Defective Photonic Crystal for Broadband Responses	Miss Asmar Aming
Design Principles of Slotted Holes	Mr. Xiangyu Cheng
Development of a Region-of-Uninterest (ROU) Detection System for Multimedia Applications	Ms. Kana Miyawaki
DEVELOPMENT OF ELECTRICAL PORCELAIN INSULATORS FROM LOCAL CLAYS	Dr. Okolo C.C
Diffusion Stability of Mechanical Equilibrium in Compressible Isothermal Gases	Dr. K.Kaliyeva
Driving Behavior Analysis Based on Vehicle OBD Information and AdaBoost Algorithms	Mr. Shi-Huang Chen
Dropped Ball Travel Time using Variation and Integration	Dr Dieudonne Ndong Ovono
eAttendance System for Academic Institutions	Mr. Gaurav Madan
Economic and Environmental Impact Assessment of Micro Grid	Dr. Su Youli
Economic Value of Femtocell Networks for Mobile Solution	Mr. Akinlabi O Akindeji
Effect of Ambient Illumination, Brightness and Tilt Angle on Typing Performance	Mr. Kasidech Srestthaporn
Efficiency of Bivariate Copula on the CUSUM Chart	Ms. Sasigarn Kuvattana
Efficient Multimedia Contents Management System with Tag Recommendations	Dr. Seungmin Rho
ENERGY OPTIMIZATION FOR UAV COMMUNICATION USING GRID CONFIGURED ADHOC NETWORK	Dr. M. Suresh Kumar
Enhanced Mathematical Model for Studying Fundamental Behaviors of Injection Locked Relaxation Oscillator	Prof. Paramote Wardkein
Entropy Information Based Assessment of Cascade Control Loops	Prof. Junghui Chen
Equitable Total Coloring of Flower Snarks and its Related Graphs	Dr. Kh. Md. Mominul Haque
Establishing Relationships between Emotion Taxonomies Using the Vector Space Model	Mr. Lei Duan
ESTIMATION OF LEAD AND OTHER ELEMENTS IN CONTAMINATED SOIL OF BAGEGA IN ANKA LOCAL GOVERNMENT AREA OF ZAMFARA STATE, NIGERIA	Dr. BISHIR UMAR
Evaluation of a Similarity Search Method for Human Behavior (Extended LDSD)	Miss ZHANG ZUO
Evaluation of Music Classification Method based on Lyrics of English Songs	Mr. Mizuki Furuya
Evaluation of Sine-Based Chaotic Strategy for Adapting Inertia Weight of Particle Swarm Optimization	Prof. Yu-Huei Cheng
Existence and Uniqueness of the Navier-Stokes Problem for Compressible Flows	Dr. K.Kaliyeva
EXPERIMENTAL STUDIES ON PRODUCTION OF METHANE USING ANIMAL MANURE	Dr. Saravanan A M
Exploit Collision: Network Coding in Switch based on VOQ Scheduling Algorithm	Miss Li Ma
Exploiting the Potential Water Supply for Eco-Industrial Parks in an Extreme Arid Area	Prof. Zulati Litifu
Extraction of the Combination Rules of Colors and Derived Fashion Images Using Fashion Styling Data	Mr. Yuta Koge
Extraction of User Context for Recommendation from Access History	Mr. Takaaki Idera
Face-to-Face Interaction using Bluetooth and Gatekeeper	Dr. Priyaam Das
Facility Layout Design On The Agricultural Machinery Industry	Dr. Nilda Tri Putri

Feature Extraction based Approaches for Improving the Performance of Intrusion Detection Systems	Prof. Long-Sheng Chen
FIB-SEM Serial Sectioning Nanotomography of Flax Fibres	Dr. Alexander M. Korsunsky
Filter pattern for consistent use of data in real-time systems	Dr. Thierry Noulamo
Finite Difference Method for Boundary Value Problems Application: High Precision Electrostatics	Dr. David Edwards Jr
Finite Element Solution to Integral Equations	Dr Dieudonne Ndong Ovono
First-Order Perturbation of Correspondence Analysis with Multiple Categories	Prof. Masaaki Ida
Forecasting Optimal Production Program Using Profitability Optimization by Genetic Algorithm and Neural Network	Dr. Galal H. Senussi
Forecasting the Prices of TAIEX Options by Using Genetic Programming and Support Vector Regression	Dr. Chih-Ming Hsu
Framework Enabling End-Users to Maintain Web Applications	Mr. Masayuki Nii
Friction Stir Spot Welding between Copper and Aluminium: Microstructural Evolution	Prof. Esther Titilayo Akinlabi
Functional Cognitive Rehabilitation Game Technology Applying Orientation and Memory for Preventing Dementia	Dr. Seungmin Rho
Fundamental Design for a Beacon Device Based Unconscious Participatory Sensing System	Mr. Mizukami Takamasa
Funding-based Productivity Decision Support System for SMEs	Prof. Buliaminu Kareem
Hard Limit CoDel: An Extension of the CoDel Algorithm	Mr. Fengyu Gao
Hindi Speech Synthesis by concatenation of recognized Hand written Devnagri Script using Support Vector Machines Classifier	Mr. Saurabh Farkya
HiRE- A Heuristic Approach for user Generated Record Extraction	Dr.Santhi Thilagam
How to Select Measurement Points in Access Point Localization	Ms. Xiaoling Yang
Humanitarian Space and Security of Humanitarian Workers: A Review	Prof. Esther Titilayo Akinlabi
Hybrid Evolutionary Model for Diabetes Diagnosis	Dr. Ojugo, A.A
Hybrid Neural Network Models for Rainfall Runoffs: A Comparative Study	Dr. Arnold Adimabua Ojugo
Hydropower Producer Day-ahead Market Strategic Offering Using Stochastic Bi-level Optimization	Ms. Yelena Vardanyan
Identifying Stress-induced and LDL-induced Differentially Expressed Genes in Vascular Smooth Muscle Cells	Dr. Ka-Lok Ng
Identifying System Calls Invoked by Malware using Branch Trace Facilities	Mr. Yuto Otsuki
Image Dissection and Categorization in Satellite Metaphors from Space Video Reconnaissance	Dr. Dhanalakshmi V
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Impact of Rapid Mixing's Initial Value on CST and SRF values	Dr. Dewi Fitria
IMPLEMENTATION OF LEAN CONCEPTS IN SCRUBBER MACHINE ASSEMBLY LINE- A CASE STUDY	Dr. Paramasivam K
Implementation of Self-Tuning Fuzzy PI Controller on DCS for Flow Control System	Mr. KHEMJIRA ASSAWATHANATORN
Incubation Scheme of the University Spin Off to Commercialize the Invention in Sebelas Maret University	Miss Citra Kusuma
Indirect Tracking of Functional Target for Respiration Compensation in Radiotherapy	Dr. Woon Kian Chong
Indoor Communication: Femtocell Behavior in an Indoor Environment	Mr. Akinlabi O Akindeji
Investigation into the Use of Mobile Technology in English Teaching and Learning in Institutes of Higher Vocational Education in Hubei Province in China	Dr. Zhang Mingyong
Isaac Newton, Leonhard Euler and F =ma	Dr. Ajay Sharma
Key Factors Affecting User Experience of Mobile Recommendation Systems	Dr. Woon Kian Chong
Latent Training for Convolutional Neural Networks	Dr. Zi Huang
Load Value Prediction Method to Utilize Prediction Miss Bias	Mr. Nobuhiro Moriwaki
Low Power State Machine Design for AES Encryption Coprocessor	Mr. Xiaoqiang ZHANG
Low-cost Bit Permutation Circuit with Concise Configuration Rule	Dr. He Zhangqing
Marketing via Social Networking Sites: A Study of Brand-Post Popularity for Brands in Singapore	Prof. Alton Chua
Markovian Reliability Analysis for Software using Error Generation and Imperfect	Mr. Gireesh Kumar

Debugging	
Methods for Classifying Pictures and Generating Music by 2D DFA and 1D FFT	Prof. Hidefumi Kawakatsu
Mining Association Rules on Students' Profiles and Personality Types	Mr. Glenn Paul Gara
MINING HIGH UTILITY ITEMSETS - A RECENT SURVEY	Dr. U.Kanimozhi
Mitigation of Conducted and Radiated EMI Generation in High-Frequency Switching Devices	Dr. Chaiyan Jettanasen
Model of Price Stabilization In Staple Food Distribution Using Game Theory: Comparative Study	Mr. Danis E. P. Wicaksana
Modification on the Synthesis Process of Hydroxyapatite	Dr. Dora Elena Ledesma-Carrion
Modified A-LTK: Improvement of a Multi-dimensional Time Series Classification Method	Miss YU FANG
Modified Resource Allocation Scheduling Algorithm for QoS in WiMAX Networks using Qualnet	Dr. Ajay Roy
Monitoring of a Wireless Network Using a Password Recovery Tool	Dr. Vladimir Sanchez Padilla
Monotone Finite Volume Schemes for Diffusion Equations on Distorted Quadrilateral Meshes	Dr. Jingyan Yue
Multi-Beam Engineering Microscopy - a Versatile Tool for Optimal Materials Design	Dr. Alexander M. Korsunsky
Multi-Initiator C-Wave Algorithm for Arbitrary Networks	Dr. Mehmet Karaata
Multi-Objective Optimal Power Flow With Generalized Interline Power Flow Controller Using NSHCSA	Prof.M.Balasubba Reddy
Music Recommendation and Play based on Content and SNS Analysis	Dr. Seungmin Rho
Music Recommender System Using a Forehead-mounted Electrical Potential Monitoring Device to Classify Mental States	Mr. Sungri Chong
Mutual Information-based Feature Selection in Spectrometric Data for Agriculture Applications	Dr. Luis Javier Herrera Maldonado
Numerical Analysis for Some Parallel Algorithms with Large Step Length Spatial Discretizations for 2-dimensional Heat Equation	Prof. Xia Cui
Numerical Study of a Hybrid Particle Filter	Dr. Haiyan Cheng

The titles and contact authors of submitted papers that have been reviewed and accepted (or accepted with minor revisions) for IMECS 2015 are listed here:

A_C, D_N, O_Others

Titles (O_Others)	Contact Authors
On Duality Concepts regarding Hypergraphs and Propositional Formulas	Prof. Stefan Porschen
On the Capability of a Fuzzy Inference System with Improved Interpretability	Mr. Hirofumi Miyajima
On the Entringer and Slater problem	Dr. Chunhui Lai
Online Signature Verification for Multi-modal Authentication using Smart Phone	Mr. Bruce Poon
On-Premises Cloud Storage - Security Aspects for Small and Medium-sized Enterprises	Prof. Markus Stopper
Optimization of Microwave Vacuum Dryer Design Parameters using CST Microwave Studio for Low-Moisture Food Application	Mr. Ronie Alamon
Optimizing Line Power Flows by Series Capacitor Placement	Ms. Samiya Zafar
Optimizing Line Power Flows by Shunt Capacitor Placement using Synchrophasor Technology	Ms. Samiya Zafar
Optimizing Pricing and Remanufacturing Decisions in Multi-level Green Supply Chain	Dr. Huang, Yun
OTK: Key Distribution Center at Cloud Providers towards Secure the Services	Mr. RAMARAO GOSE
Parallel Implementation of Iterative Methods for Solving PDEs	Dr. Muhammad Naveed Akhtar
Path Optimization for Electrically Inspecting Printed Circuit Boards with Alignment Marks	Dr. Hideki Katagiri
Path-overlap Avoidance in Multiple Route Construction for Mobile Relay on WSN	Mr. Yogi Anggun Saloko Yudo
PERFORMANCE ANALYSIS OF CLASSIFICATION AND CLUSTERING ALGORITHMS USING HADOOP MAHOUT	Dr. Asadi Srinivasulu
Performance Analysis of Maximum Power Transfer in Piezoelectric Energy Harvesting	Dr. Chaiyan Jettanasen
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Performance Evaluation of Photon Diffusion Models Configured in Planar Source Illumination Geometry for Quantifying the Optical Properties of Turbid Media	Prof. Sheng-Hao Tseng
Performance of a Variable Speed of the Split Unit Air Conditioning System using Fuzzy Logic Controller	Dr. Henry Nasution
Performance of Three Preconditioners for Image Deblurring Problem in Primal-Dual Formulation	Dr. FAISAL FAIRAG
Police Officer Selection Process for Incident Response	Miss Johanna Leigh
Power Supply Circuit With Zero Standby Power Consumption on Infrared Remote Controlled Product by Using Energy Harvesting	Prof. Akira Yamawaki
Practical Design of a Passive EMI Filter for Reduction of EMI Generation	Dr. Chaiyan Jettanasen
Prospective of Medical Cost for Diabetes Mellitus for Sex and Age Group in Range 2012-2050: Case of Mexico	Dr. Dora Elena Ledesma-Carrion
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Putting Numbers to Value: Going Simplistic for Reaching Lean Manufacturing	Miss Zuhara Ivette Chavez Lopez
Python Classes for Numerical Solution of PDE's	Prof. Kare Olaussen
QBSA 4 W2S : QoS-Based Scalable Approach for Web Services Selection	Dr. Mansour Mekour
Queuing Model For Shinde Restaurant	Dr. Rameshwar Bhutada
Quine-McCluskey Repair Technique for Evolutionary Design of Combinational Logic Circuits	Mr. Xiaoqiang ZHANG
RAID-5 STRATEGY IN VIRTUAL HYBRID CLOUD (R5 VHC)	Dr. Ch Prem Kumar
Real Time Recognition of Filipino Sign Language Using Bayesian Network	Dr. Vera Geroda
Real-Time Implementation of a Power Series Based Nonlinear Controller for the Balance of a Single Inverted Pendulum	Prof. Hien Tran
Reliability Analysis for a Repairable System under N-policy and Imperfect Coverage	Dr. Richa Sharma
Remarks on Solving Algebraic Riccati Matrix Equations using a Hopfield Neural	Prof. Kazuhiko Takahashi

Network and Application to Optimal Control Problems	
Research in Modeling of Complex Adaptive Petri Net	Dr. Jun Wang
Research in Virtual Cotton Spinning Process based on CAPN	Dr. Jun Wang
RESEARCH ON MUTUAL COUPLING CORRECTION OF ARRAY OUTPUT SIGNAL BY BP NETWORK	Dr. Yuan Shiji
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TiMers: Time-based Music Recommendation System based on Social Network Services Analysis	Dr. Seungmin Rho
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Transient Thermal Analysis of Power Cable-Considering Skin Effect	Mr. Yuandong Gong
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Wikiaudia: Crowd-sourcing the Production of Audio and Digital Books	Prof. Kavi Mahesh
Wireless Transport Layer Security	Dr. vikas yadav
3D Inspection for HDD Production Process using Laser Light Sectioning	Dr. Navaphattra Nunak

The Design of Hotel Performance Management System in Padang

Difana Meilani, Ilham Anugrah

Abstract— **As a tourist place, Indonesia is supported by its beautiful natural scenaries and unique cultures. Actually most of Indonesia incomes came from tourism sectors. Padang as the administrative center of West Sumatra is one of tourism places in Indonesia. Unfortunately, all the facilities and touris actractions here need improvement, for example the hotels. Hotels in Padang need attention on the performance management system. One of the them is Premier Basko Hotel. This hotel depends on profit targets and classification of IHRA (Indonesian Hotel & Restaurant Association). For the increasement of this hotel, SWOT (Strength, Weakness, Opportunity, Threats) analysis and balanced scorecard method were applied. It began with the strategic information gathering based on interviewing the company, then continue processing it into a questionnaire which based on SWOT research. At this point, it is known that Premier Basko Hotel is in quadrant II (strength-threat) SWOT analysis diagram. So, this hotel needs to implement a diversification strategy. It also has 14 types of alternative strategies with strategic goals, 14 factors on Critical Success Factors (CSF), 38 indicators on Key Performance Indicators (KPI), and 38 pieces forms of performance management system. All of these are as the form of guidelines for the performance management system Premier Basko Hotel.**

***Index Terms*— Hotel, KPI, Performance Management System, SWOT-BSC**

I. Introduction

INDONESIA'S beautiful natural views and cultural diversities are the advantages that Indonesia has to be a tourist place. As a tourist place, it is going to contribute greatly to the nation's economy.

West Sumatra as part of Indonesia tourism has to provide facilities and tourist attractions and this is the role and responsibility of the central government. Through interviews with the Licensing to The Tourism Section Head of Culture and Tourism of Padang, it is known that the attractiveness of tourism in Padang is the mix of natural shades to legend, cultural attractions, sports interests, and supported with a taste of traditional Minangkabau food that has been widely recognized by the world. The combination can be encountered on various objects and attractions such as Air Manis Beach, Caroline Beach, Nirwana Beach, Siti Nurbaya Festival, Dragon Boat Festival and Tour of The Batur. The presence of food such as rendang, beef jerky and various chips Sanjai, are the tourist attractions of Padang. So it can be concluded that tourism sector is the focus of development and the biggest income of Padang.

Realizing tourism as an economic power of Padang, revamping and improving the assessment of development of various objects are needed. One of the objects is the hotels. Hotels are included as a primary means of supporting tourism activities. From interviewing IHRA executive director of West Sumatra, Elvis Syarif, he said that, the hospitality industries like hotels need a guidance for internal performance improvement.

Premier Basko Hotel is one of the 52 unit hotels in Padang [3]. This Hotel is located at Jalan Prof. Dr. No. Hamka. 2A Padang. It has 180 rooms with 9 units of different types, 9 units meeting rooms with different capacities, restaurant with international cuisine, lounges, swimming pool, laundry, as well as a wide range of facilities at the business center. Actually, it is the only 5 star hotel in Padang. This hotel is applying SWOT (Strength, Weakness, Opportunity, and Threat) in its effectiveness operational.

Rangkuti said that SWOT is a form of long-term development plan in the streamline operations, based on the opportunities, threats, strengths and weaknesses of the company [9], [20]. The combination of SWOT analysis of the balanced scorecard method, which was introduced by Robert S. Kaplan and David P. Norton in 1992 is able to give a clear description for the improvement and development direction of the company [11].

So the design of the performance management system generated from the combination of these two methods can be a guide for Premier Basko Hotel in particular, and for industry hospitality in general.

II. Review of Related Literature

A. Hotel

There are several definitions of a hotel. The following is two of them.

1. Hotel Proprietors Act, 1956 said that hotel is a company managed by its owner, by providing services in food, beverages, and room for people who are travelling, and they are able to pay amount of money based on the service they got without any special agreement [8].
2. Endang, 2013 said that Hotel is a commercially organized lodging which meets the government's requirements by providing services in food, beverage, and other services [4].

Endang classified a hotel which is [4]:

1. Based on the layout of the building

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a. Resort hotel: a hotel which is located in the attractions area.
b. City hotel: a hotel which is built in urban areas.
c. Airport hotel: a hotel which is built adjacent to the airport.
d. Urban hotel: a hotel which is built in rural areas.
e. Suburb hotel: a hotel which is built in the suburb.

2. Based on long time stay
   a. Transit hotel: a hotel that is used for one or two nights.
   b. Resident hotel: a hotel that is used as a residence.
   c. Semi resident hotel: a hotel that is used as a temporary shelter.
3. Based on room tariff
   a. American plan: hotels with room rates + the cost of three meals.
   b. European plan: hotels with room rates which do not include the cost of eating.
   c. Modified American plan: hotels with room rates + the cost of two meals.
   d. Continental plan: hotels with room rates which include continentall breakfast basis.
   e. Bermuda plan: hotels with room rates which include American breakfast.
4. Based on the number of hotel rooms
   a. Small hotel: a hotel with number of rooms maximum 28 units.
   b. Medium hotel: a hotel with number of room around 28-299 units.
   c. Large hotel: a hotel with number of rooms more than 300 units.

B. Performance Management

There are several definitions of performance. Rizki and Mutia shows that performance is a whole view of the condition of a company in a certain period of time, and it is the result of an achievement from a company operational activities by processing the available resources [22]. While Wibowo said that performance is the result of a strong work associated with the strategic objectives of the organization, customer satisfaction and contribute to the economic [23].

Performance management is an agreement-based interactive control model [18]. Performance measurement is an essential part of the performance management. By measuring, people transform complex reality into simplified numerical concepts that can be communicated easily and acted upon. According to Lebas, the simplification of reality by measuring is the prerequisite of successful management [15]. Similarly, Bititci et al and Forza, argue that performance measurement is at the heart of the performance management process and it is of critical importance to the effective and efficient functioning of performance management [2], [5].

C. Balanced Scorecard

A Robert S. Kaplan and David P. Norton agreed that Balanced Scorecard is one measurement set for getting a quick and whole view of a business based on the financial which contains the finished programs in order to complement the size of the non-financial and operational, customer satisfaction, internal processes, innovation and size of operations of organizational improvement activities, in order to spur future financial performance [13].

Balance scorecard has four terms, as follows:
1. Financial and nonfinancial indicators
2. Past, present and future indicators
3. Internal and external indicators
4. Cause and effect indicators

The balanced scorecard has four perspectives [12]. According to Kaplan and Norton, they are:
1. Finance
2. Customers
3. Internal business processes
4. Learning and growth

D. SWOT

Rangkuti said that SWOT stands for strength, weakness, opportunity and threat. It is a kind of company development which derived from a long term planning in creating effective operational activities based on SWOT [1]. TOWS' matrice is a way for brainstorming in order to create several alternative or strategies for the company [6], [7].

E. SWOT - Balanced Scorecard

The implementation of SWOT - balanced scorecard in a company can produce speed and ease monitoring and controlling a business [23]. Conjoining the SWOT matrix with the balanced scorecard (BSC) makes a systematic and holistic strategic management system [16]. Here is a picture of a SWOT matrix - the balanced scorecard:

BSC / SWOT	Finance	Costumer	Internal Business Process	Learning & Growth
Strengths	Financial Strengths	Costumer Strengths	Internal Business	Learning & Growth
Weaknesses	Financial Weaknesses	Costumer Weaknesses	Internal Business	Learning & Growth
Opportunities	Financial Opportunities	Costumer Opportunities	Internal Business	Learning & Growth
Threats	Financial Threats	Costumer Threats	Internal Business	Learning & Growth

Fig. 1. Matrice of SWOT-BSC

F. CSF and KPI

Critical Success Factors (CSF) are the essential elements for the success of the company in implementing the strategy [19]. CSF is determined based on the process of collecting data in order to reach the goals of every stakeholder.

Once CSF is known, the Key Performance Indicators (KPIs) can be formulated. Here is some characteristics of CSF:
1. Easy to understand
2. Can be optional choice
3. Related to balanced scorecard perspective
4. Focus on specific areas

Key Performance Indicators (KPI) is a set of measurements that focuses in every critical performance aspect for the success of a company in present and future [19].

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III. Research Method

Below is the flowchart of research methodology:

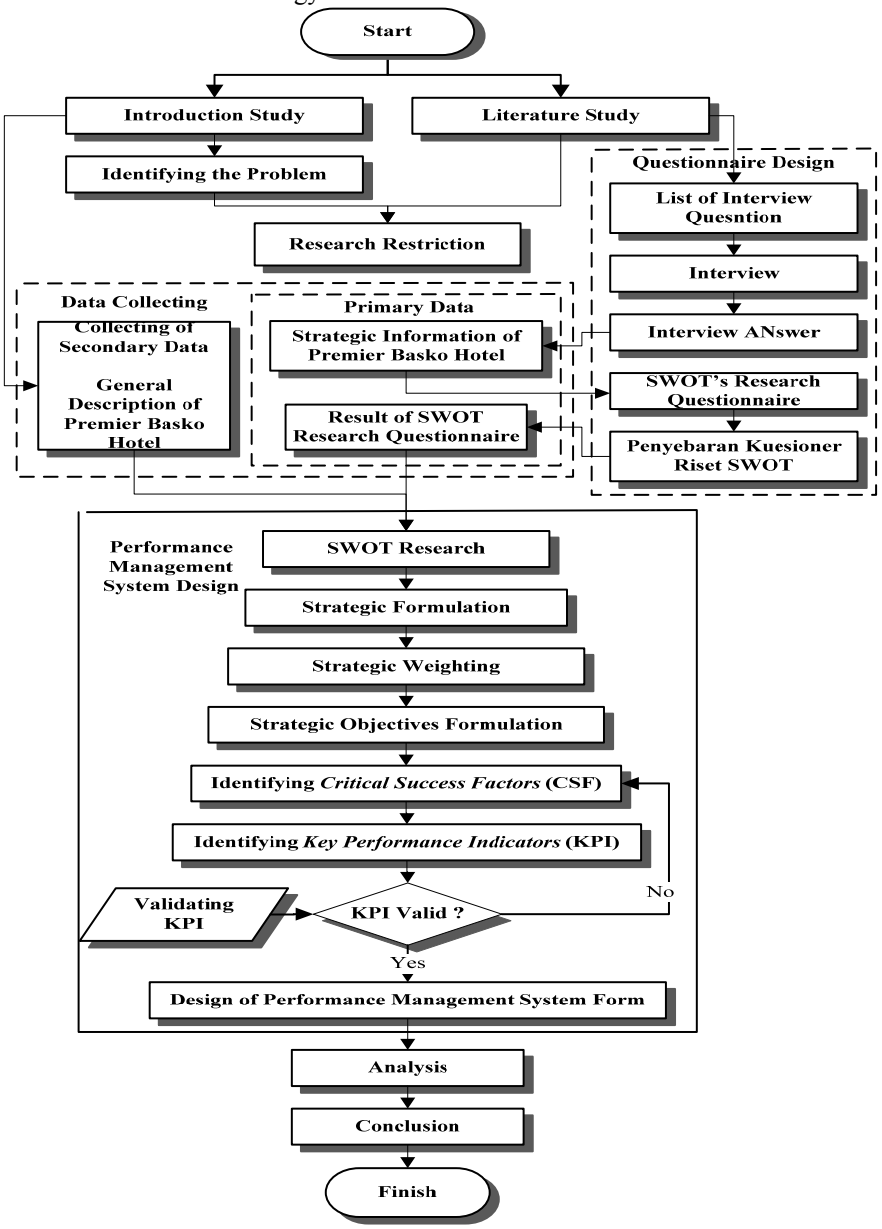

Fig. 2. Flowchart of Research Method

IV. Result And Discussion

A. Data Collecting

The data of the internal and external aspects (strategic information) of Premier Basko Hotel were obtained from the formulation of the questions list and from the interview. The results were then written in SWOT research questionnaire. The questionnaire was distributed to 8 respondents that responsible in Hotel manageria. They are the General Manager, Head of the Department of Human Resources, Accounting, Housekeeping, Sales & Marketing, Front Office, Food & Beverage and Engineering. From the questionnaires, we can know the average existing condition from respondents of the hotel and the average urgency handling also from the respondents. From this, the rank or the handling priority can be determined and it is shown in Appendixes Table I

B. Data Processing

1. Research of SWOT

The position of the hotel which is based on the difference between the average values of accumulative aspects of internal and external and with the median value (value of 3). The position of the hotel is in quadrant II (strength-threats) with the coordinate (0.17, -0.19).

2. Strategic Formulation

The strategic formulation at Premier Basko Hotel can be obtained with TOWS matrix by brainstorming in order to create several alternatives or strategies at the hotel. The alternative strategies for Premier Basko Hotel is derived from the result of strategic formulation on TOWS matrix. The strategies are divided into SO (Strengths Opportunity),

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WO (Weakness Opportunities), Strengths Threat (ST) and WT (Weakness Threats). It is shown in Table II Appendix

3. Strategic Weighting

Weighting strategy is done by assessment (in value range 1-5) for each alternative strategy which is based on the relationship of each indicator in relation to the external and internal aspects. The highest weight is 368 from the ST strategy and the strategic alternatives is strengthening the characteristic of the hotel.

4. Formulation of Strategic Objectives and Identifying Critical Success Factors

Formulation of strategic objectives is done by classifying each alternative strategy into four perspectives in balanced scorecard. Critical Success Factors (CSF) are obtained from the critical factors of each hotel strategy objectives. The strategic objectives and the Critical Success Factors of Premier Basko Hotel are as shown in Table III Appendix.

5. Key Performance Indicators of Identifying and Validating

The valid Key Performance Indicators (KPI's) in the Premier Basko Hotel is shown in Table III Appendix

6. Designing form of Performance Management System

There are 38 forms of Performance Management System that have been designed for the Premier Basko Hotel

V. Conclusion

From the research, it is concluded that Premier Basko Hotel is currently in kuadran II (strength-weaknesses) SWOT analysis diagram, so the hotel needs to implement diversification strategic. It is a strategic for collecting all internal powers and avoiding all company external threats in order to get all the long term opportunity. This research also produces 14 strategic alternatives for Premier Basko hotel. Furthermore, this Hotel also has 14 Critical Success Factors (SCF) and 38 Key Performance Indicators (KPI), and 38 forms of performance management system which can be a guidance for Premier Basko Hotel in improving company performance management system quality.

APPENDIX A

Appendix A shows the table of the Existing Condition and urgency handling from the respondents of Premier Basko Hotel, table of TOWS Matrix at Premier Basko Hotel and also table of Strategic Objectives, Critical Success Factors and Key Performance Indicator of Premier Basko Hotel

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APPENDIX A

TABLE I.
EXISTING CONDITION AND URGENCY HANDLING FROM THE RESPONDENTS OF PREMIER BASKO HOTEL

Aspect	No.	Indicator	Respondent Average for Existing Condition	Respondent Urgency Handling	
				Average	Rank
Internal	1	Hotel cash flow	3.00	2.25	10
	2	Hotel profitability	3.63	2.25	11
	3	The role of hotel rooms in hotel profitability	3.88	2.38	8
	4	The role of FB asset in hotel profitability	2.38	3.00	1
	5	The role of MICE asset in hotel profitability	3.13	3.00	2
	6	Empowerment of FB & MICE asset	2.75	3.00	3
	7	Development of hotel facilities	3.00	2.00	16
	8	Hotel services	3.25	1.88	19
	9	The quick response and hotel service hours	3.25	1.88	20
	10	Procurement creativity of events, such as : new year, etc.	3.25	2.00	17
	11	Technology of the hotel	3.25	2.25	12
	12	Human resources professionality in hotel	3.38	2.25	13
	13	Organizational climate of hotel	3.13	1.88	21
External	1	Investors' role toward the hotel	3.00	2.00	18
	2	Bangking's role toward the hotel	3.00	2.75	5
	3	Government's role toward the hotel	2.75	2.38	9
	4	The influence of the tariff war between hotels	2.88	2.88	4
	5	Padang Tourism	3.25	2.13	14
	6	The arrival of customers (tourists)	3.13	2.75	6
	7	The development of tourism in Padang	2.25	2.75	7
	8	The presence of an apartment or condominium	2.25	2.13	15

TABLE II.
MATRIX OF TOWS AT PREMIER BASKO HOTEL

Matrix TOWS of Premier Basko Hotel		
Internal / **External**	**Strength (S)**	**Weakness (W)**
	1. The role of hotel rooms in hotel profitability	1. The role of Food & Beverage (FB) asset in hotel profitability
	2. Hotel profitability	2. The role of Meeting Incentive, Convention & Exhibition (MICE) asset in hotel profitability
	3. Human resources professionality in hotel	3. Enpowerment of FB & MICE asset
	4. Organizational climate of hotel	4. Development of hotel facilities
	5. Hotel services	5. Hotel cash flow
	6. The quick response and hotel service hours	
	7. Procurement creativity of events, suchs as : new year celebration, christmas, etc	
	8. Technology of the hotel	
Opportunities (O)	**Strategic Alternatives**	
1. Padang Tourism	1. Increasing the number and quality of hotel rooms (S1,S2,S5,S6,O1,O2,O3,O4,O5&O6)	1. Improving asset quality of hotel FB (W1,W3,W4,O1,O2,O3,O4,O5&O6)
2. The development of tourism in Padang	2. Inproving the quality of hotel services (S1,S2,S3,S4,S5,S6,O1,O2,O3,O4,O5&O6)	2. Improving asset quality of hotel MICE (W2,W3,W4,O1,O2,O3,O4,O5&O6)
3. The arrival of customers (tourists)	3. Improving the professionality of hotel human resources (S3,S4,S5,S6,O1,O2,O3,O4,O5&O6)	3. Increasing the promotion of FB & MICE asset of the hotel (W1,W2,W3,O1,O2,O3,O4,O5&O6)
4. Government's role toward the hotel	4. Enhacing procurement creativity of events (S2,S3,S7,O1,O2,O3,O4&O5)	4. Developing hotel facilities (W4,O1,O2,O3,O4,O5,O6)
5. Investors' role toward the hotel	5. Developing technologies owned by hotels (S2,S8,O1,O2,O3,O4,O5&O6)	5. Improving cash flow management systems of the hotel (W5,O5&O6)
6. Bangking's role toward the hotel	6. Increasing hotel promotion (S1,S2,S3,S5,S7,S8,O1,O2,O3,O4,O5&O6)	
Threats (T)	**Strategic Alternatives**	
1. The influence of the tariff war between hotels	1. Establishing cooperation and communication between the hotels (S3,S4,T1&T2)	1. Developing assets variations and other services of the hotel (W3,W4,T1&T2)
2. The presence of an apartment or condominium	2. Strengthening the characteristics of the hotel (S1,S2,S3,S5,S6,S7,S8,T1&T2)	

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TABLE III.
STRATEGIC OBJECTIVES, CSF AND KPI OF PREMIER BASKO HOTEL

Balanced Scorecard Perspective	Strategy	Strategic Objectives	Critical Success Factors (CSF)	Key Performance Indicator (KPI)
Finance	Increasing the number and quality of hotel rooms	Increased profit hotel	The level of hotel profits	Revenue percentage of hotel
				Profit percentage of hotel
	Increasing hotel promotion	Increased number of hotel guests arriving in the hotel	The number of hotel guests arriving in the hotel	Percentage of hotel guest arrivals (customer)
	Increasing the promotion of FB & MICE asset of the hotel	Increased number of guest arriving in hotel FB&MICE	The number of guest arriving in hotel FB&MICE	Percentage of customer arrival of hotel FB
				Percentage of customer arrival of hotel MICE
	Establishing cooperation and communication between the hotels	Stability sales price of hotel rooms	The level of hotel room sales	Percentage of hotel room sales
				Stability of sales price of hotel rooms
	Improving cash flow management systems of hotel	Improved cash flow management system of hotel	The management of hotel financial cash flow	Cash flow of the hotel
Customer	Strengthening the characteristic of hotel	Strengthened the brand image of the hotel	The brand image of hotel	Market share of hotel guest
				Amount of new hotel guest
				Market share of hotel FB customer
				Amount of new hotel FB customer
				Market share of hotel MICE customer
				Amount of new hotel MICE customer
	Developing hotel facilities	Increased hotel guest satisfaction toward hotel facilities	The satisfaction level of hotel guest toward hotel facilities	Satisfaction level of guest on hotel facilities
	Improving the quality of hotel services	Increased hotel guests satisfaction toward hotel services	The satisfaction level of hotel guest toward hotel services	Satisfaction level of guest on hotel service
				Frequency of hotel guest complaint
				Service time of hotel guest
				Loyality level of hotel guest
	Improving asset quality of hotel FB	Increased customer satisfaction of FB hotel	The satisfaction level of customers FB hotel	Satisfaction level of hotel FB customer
				Frequency of hotel FB customer's complaint
				Service time of hotel FB customer
				Loyality level of hotel FB customer
	Improving asset quality of hotel MICE	Increased customer satisfaction of MICE hotel	The satisfaction level of customers MICE hotel	Satisfaction level of hotel MICE customer
				Frequency of hotel MICE customer's complaint
				Service time of hotel MICE customer
Internal Business Process	Developing assets variations and other services of the hotel	Improved services asset variation of hotel	The innovation level of hotel service assets	Amount of new service asset of hotel
				Level of hotel facilities development
	Enhancing procurement creativity of events	Increased creativity procurement events	The creativity level of procurement events	Amount of hotel procurement event
	Developing technologies owned by hotels	Developed hotel technology	The technology level owned by hotel	Level of hotel technological development
Learning & Growth	Increasing the professionality of hotel human resources	Increased professionality of hotel human resources	The profesionality level of hotel human resources	The Absence of hotel human resources on working
				Frequency of human resource fault on working
				Frequency of work accident
				Amount of hotel human resource with good performance
				Frequency of training on hotel human resources
				Amount of human resources with an increasing performance after training
				Frequency of fault of human resources
				Satisfaction level of human resources

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