

KITTIPONG TECHAPANICHGUL

98/62 Infinity Condominium, Room.19B
Narathivas Rachanakarin Road, Silom
Bangrak, Bangkok, Thailand 10500

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http://alum.mit.edu/www/kittipong

RESEARCH MISSION

Research and develop an innovative approach to leverage technologies in computer science, data sciences, system design, complexity science, learning sciences and human-computer interaction to:			
Enrich personal human learning experiences	Cultivate human's attitude toward critical thinking	Promote diffusion of educational innovations	Foster a learning culture in societies

RESEARCH INTEREST

Data Analytics, Complex Systems, Human-Computer Interaction, Tangible Interfaces, Augmented Reality, Constructionist Learning, Human Motivation, Educational Innovations and Open Educational Resources

EDUCATION

Massachusetts Institute of Technology, Cambridge, MA School of Engineering and Sloan School of Management Master of Science in Engineering and Management with a GPA of 4.6 System Design and Management (SDM) Fellow Thesis Title: <i>Revolutionizing Education with the Awareness of the Value of Knowledge Concepts in High School</i> Thesis Advisor: Pat Hale, Director of the SDM Fellows Program at MIT <ul style="list-style-type: none">Research Assistant of Guided Learning Pathways (GLP) Research ProjectMedia Committee in the SDM Leadership CommitteeWebmaster of the Thai Student Association at MIT	2009-2011
University of Pittsburgh, Pittsburgh, PA Master of Science in Information Science with a GPA of 3.79 <ul style="list-style-type: none">Graduate Student Researcher (GSR) of Instruction and Learning DepartmentWeb Administrator of the Thai Student Association at the University of Pittsburgh	2004-2005
Chulalongkorn University, Bangkok, Thailand Bachelor of Science in Computer Science with a GPA of 3.13 <ul style="list-style-type: none">Co-Director of Science Department Reception in Chulalongkorn Academic Exhibition#5System Administrator of Computer Science Department	1999-2003
Bangkok Christian College, Bangkok, Thailand High School Diploma <ul style="list-style-type: none">Vice President of Math and Science Club	1993-1998

RESEARCH EXPERIENCE

GLP – Guided Learning Pathways Fujitsu research project aimed at designing and creating a new web-based learning environment Researched, designed and implemented an MIT-developed idea that creates alternative on-line pathways from start to completion of an academic course, so the learner can select her or his preferred path to achieve desired learning objectives.	2011
REACH – Revolutionizing Education with the Awareness of knowledge Concepts in High school Master's thesis of the System Design and Management program at MIT Researched, designed and implemented a conceptual system raising high-school students' awareness of the value of knowledge concepts and motivating the students to learn intrinsically by introducing students to the realization of the values of knowledge concepts, the applications of knowledge concepts and the connections among knowledge concepts. A proof-of-concept of the conceptual system is implemented to allow students to play with the system while their feedbacks are collected for analysis.	2011
ADVisE3D – Active Document Visualization for Education An Independent Study at the University of Pittsburgh Researched and developed a data visualization tool showing the document similarity in a document space where the spatial arrangement is rendered according to the data source of the document-similarity distance. Cosine Similarity and Euclidean Distance are used to calculate the document coordinates in the space, which allow users to view the document space in 2D, 3D or both.	2005
ATCMS – Automatic Traffic Control and Monitoring System Computer Science Final Project at Chulalongkorn University Researched, designed and developed a traffic simulation software searching for optimal patterns of traffic light sequences in order to smoothen traffic congestion in problematic areas in Bangkok. Real traffic data were acquired and analyzed to formulate a mathematical model used in ATCMS.	2003

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PROFESSIONAL EXPERIENCE

Thai Pet Industrial Company Limited, Bangkok, Thailand

Jul 2011 - Present

Internal Management Consultant & Project Manager

- Investigated and identified key areas for improvement in current business operations, leading to the proposed short-term and long-term strategies to turn around the company, resulting in the revenue increase in the FY2013 of 5 percent in contrast to the Thailand's 2013 GDP growth rate of 2.9 percent
- Conducted a comprehensive competitor analysis to discover a compelling value proposition where sales and marketing team subsequently undertook as a direction to strengthen the company competitiveness
- Developed tactics together with the sales and marketing team to effectively convert leads to customers from THAIFEX and PROPAK 2012, resulting in new customer orders worth a total of \$560K per year
- Setup and led the steering committee to create a holistic visualization of business processes and workflows with BPMN, which assisted in the succeeding discovery of cost-intensive activities and business reengineering opportunities
- Introduced and demonstrated Google Apps scripting techniques to IT team to implement the business analytics and business process automation between Google Apps platform and other web services
- Designed and prototyped a graphical root cause analysis web service based on customer complaints with Google Visualization API and Google Query Language
- Devised a novel knowledge management practice that exploits new media to create more engaging and meaningful learning experiences for successors, resulting in the shorter training period
- Empowered sales and marketing team with iOS devices and productivity apps to not only shorten the sales cycle from months to weeks but also provide timely customer supports and services
- Provided directions for a creative packaging design team to create a morphological matrix for packaging designs used as an input for an IOS-based application of do-it-yourself (DIY) packaging designs, which is a part of mass customization manufacturing project
- Successfully convinced the management team to invest in an energy measurement system, which is a part of digital enterprise transformation plan, to elucidate the major company cost structure in real time for the first time
- Led an interdepartmental team to implement the payroll automation system using fingerprint scanner, deducting the payroll processing time by 30% while increasing the data reliability for accurate cost accounting

ExxonMobil Limited, Bangkok, Thailand

Sept 2006 – Nov 2008

Testing and Quality Assurance (TQA) Service Administrator (2007– 2008)

Provided centralized application testing support for organization's application development and projects

- Successfully delivered Work Transition Project (WTP) within change in control (CIC) date, satisfying sending team's expectation and leading to the service establishment in Asia Pacific region
- Completed a knowledge transfer session in Houston within 17 business days as a part of the WTP, resulting in the abilities to provide fundamental application supports to users as well as continuing on-going work relating to the WTP
- Handled and resolved most of the Problem Management and Ticketing System (PMTS) tickets with little help from the former subject matter expert, who was assigned to another unit; exceeded the defined service-level objective
- Initiated and led a meeting of 7 multinational members to address concerns and potential issues of a server upgrade, which yielded a comprehensive draft of server upgrade plan that would avoid possible impacts from service interruption
- Led and motivated the whole Bangkok ATS (BATS) team to creatively create 14 posters for Safety Challenge Competition, which made BATS team achieve the 51st rank in Global positions

Business Line Application Analyst, FileNet system business applications (2006– 2007)

- Constructed an in-depth analysis for the design and uses of FileNet system, which significantly reduced problem investigation time
- Conducted FileNet setup, configuration and deployment to meet business requirements
- Monitored system availability for timely recovery, resulting in overall decreased downtime

University of Pittsburgh, School of Education, Pittsburgh, PA

Feb 2005 – Jul 2006

System Programmer III

- Led an initiative to design interactive forms in MS Access; applied a usability heuristics method which increased user productivity
- Developed a Java application for the Pennsylvania Alternative System of Assessment (PASA) to use

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- barcode scanners that automatically stored data and ensured database integrity
- Designed and developed PASA website based on the Model-View-Controller (MVC) design pattern using JSP, Jakarta Struts Framework and Apache Tomcat Server 5.5

Total Access Communication Plc. (DTAC), Bangkok Thailand

Mar – May 2001

Visual Basic Programming Intern

- Designed and developed a user assistant agent in MS Access to provide guidelines in creating corporate reports (e.g., project feasibility report)

SKILLS

Computer Programming	C/C++, Objective-C, Java, ActionScript 3, LISP, VB, Pascal, SQL
Web Programming and Database	HTML, XML, JSON, CSS, JavaScript, PHP, JSP, ASP, PERL, Jakarta Tomcat 5, Struts framework, Eclipse, Flash Builder, AWT/Swing, MS SQL Server, Oracle, MySQL, Google App Script
Media Productivity Tools	Adobe Dreamweaver, Adobe Flash, Adobe Photoshop, Adobe Illustrator, Adobe Premier, Sony Vegas, 3D Max

AWARDS AND ACTIVITIES

Guest Lecturer

Fall 2011 & 2012

Providing lectures on System Design and Management to computer science undergraduate students enrolling in the System Design and Analysis class at Chulalongkorn University

Founder, Reachmydream.org

Jun 2010 - Present

Founded a non-profit website providing an interactive tool for high school students to recognize the value of knowledge concepts in high school

Research Assistant, Engineering Systems Division, MIT

Feb 2011 - May 2011

Researched, designed and developed a software prototype that dynamically displays possible learning pathways from start to completion of an academic course to empower learner to achieve desired learning objectives according to her or his learning preferences

Finalist of Mckinsey Insight Asia

Aug 2010

Being one of the thirty-six finalists selected to attend an invitation-only seminar Mckinsey Insight Asia, which provides an opportunity to crack consulting cases and learn how to work as a professional management consultant

Master of Ceremony, BLA team-building, ExxonMobil (Thailand)

Oct 2008

Run the team-building event for the Business Line Application (BLA) department

Graduate Student Researcher, School of Education, University of Pittsburgh

Feb 2005

Developed web applications for PASA – a \$4M research project funded by the Commonwealth of Pennsylvania to develop and pilot statewide alternative assessments for students with severe disabilities

Honorary Mention Award of Invention Competition, National Youth Bureau of Thailand

1996

Received a honorary mention award for an invention from recyclable materials

Winner of Invention Competition, Bangkok Christian College

1995

Winner of the invention from recyclable materials