

CHATCHAI (MARK) WANGWIWATTANA, PH.D.

Portfolio
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SKILLS

Research & Data Analysis: Deep Learning, Tensorflow, Keras, Python, R
Software Development: iOS, Android SDK, C/C++, Java, Design Patterns
Video Game Development: Unity3D, Cocos2d-x, UDK, OpenGL, GLSL
Web Development: Node.js, Polymer, JavaScript, PHP, SQL, jQuery, MySQL
Graphics Design: Adobe Photoshop, Flash, After Effect, 3Ds Max, Inkscape

EDUCATION

Jan 2014 – Dec 2017 Southern Methodist University, Dallas, Texas
▪ **Ph.D. in Computer Science**
Jan 2012 – Dec 2013 The Guildhall at Southern Methodist University, Dallas, Texas
▪ **Master of Interactive Technology in Digital Game Development (Specialization in Software Development)**
Jul 2004 – Mar 2008 University of the Thai Chamber of Commerce, Bangkok, Thailand
▪ **Bachelor of Science (1st Class Honors)**

PROFESSIONAL EXPERIENCE

Jan 2018 - Current Lecturer University of the Thai Chamber of Commerce, Bangkok Thailand
▪ Taught several game development/business courses
Jan 2018 - Current Consultant BeBella Clinic, Bangkok Thailand
▪ Consulted on digital transformation and digital marketing to support business goals
May 2017 – Dec 2018 CTO Profitarrowmarketing, LLC, Dallas USA
▪ Managed all technological aspects of the company
▪ Designed strategies to meet a business goal
May 2015 - Nov 2015 Software Engineer Research in Mathematics Education at SMU
▪ Developed and designed UI/UX an educational software for the Texas Education Agency on iOS and Android
▪ Developed and designed an educational software management with Polymer and Firebase
▪ Led Conducting Usability Testing
Nov 2014 - March 2015 Developer/Designer LJJ Social Impact Consulting, LLC
▪ Designed and developed an Educational game for teaching financial concepts from start to finish (Unity Engine)
▪ Consulted and managed the project
Dec 2010 – Dec 2011 Lecturer University of the Thai Chamber of Commerce, Bangkok Thailand
▪ Developed and maintained faculty's website
▪ Developed and maintained UI of Instructor Management system
May 2008 – Dec 2010 Research Assistant University of the Thai Chamber of Commerce, Bangkok Thailand
▪ Developed various research artifacts
May 2004 – Dec 2008 Web Developer
▪ Developed and designed UI for SAS Document Management System PHP, JavaScript

SELECTED PROJECTS

RGB Image-Based Pupillary Diameter Tracking with Deep Convolutional Neural Networks 4 years
▪ Ph.D. Dissertation
Facial Expression Recognition add-on for Intel Perceptual Computing SDK 6 months
▪ Master of Thesis
Photoplethysmography Extraction with a commodity Device iOS 1 month
▪ Designed and developed the system
Stop and Frisk Data Analysis and Stopped Prediction Model R 1 month
▪ Analyzed New York Stop and Frisk data and developed a model for predicting people who may get stopped.
▪ Wrote a report
Food Color Prediction of Chiffon Cake Simulation OpenGL 2 months
▪ Developed the system
Simulation for Teaching Assistance of Computer Graphics OpenGL 4 months
▪ Designed and developed the system

SAR Document Management System	PHP, MySQL	2 months
<ul style="list-style-type: none"> ▪ Developed the system 		
Kraven Manor (3D first-person horror survival)	UDK Engine	8 months (Team of 12 people)
<ul style="list-style-type: none"> ▪ Developed and designed UI/UX by using Adobe Flash and Scaleform ▪ Developed some main core mechanics related to user interaction and communication 		
Grow Me (2D physics based game)	Android NDK	5 weeks
<ul style="list-style-type: none"> ▪ Designed and developed main core mechanics ▪ Designed UI/UX of the game 		
Blue Sapphire (Simulation)	Unity3D	5 months
<ul style="list-style-type: none"> ▪ Designed and developed main core mechanics ▪ Designed UI/UX of the game 		
Dodge'em (2D casual game)	iOS	3 months (Team of 2 people)
<ul style="list-style-type: none"> ▪ Developed main core mechanics ▪ Designed user interface and art assets 		

PUBLICATION

Journal

- **Wangwiwattana, C.,** Ding, X., & Larson, E. C. (2018). *PupilNet, Measuring Task Evoked Pupillary Response using Commodity RGB Tablet Cameras: Comparison to Mobile, Infrared Gaze Trackers for Inferring Cognitive Load*. Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies, 1(4), 171.

Conferences

- **Wangwiwattana, C.,** Rafiqi, S., Fernandez, E., Nair, S., & Larson, E. (2015). *Work-in-progress, PupilWare-M: Cognitive load estimation using unmodified smartphone cameras*. In Proceedings - 2015 IEEE 12th International Conference on Mobile Ad Hoc and Sensor Systems, MASS 2015. <https://doi.org/10.1109/MASS.2015.31>
- Rafiqi, S., **Wangwiwattana, C.,** Fernandez, E., Nair, S., Kim, J., & Larson, E. C. (2015). *PupilWare: Towards pervasive cognitive load measurement using commodity devices*. In 8th ACM International Conference on Pervasive Technologies Related to Assistive Environments, PETRA 2015 - Proceedings. <https://doi.org/10.1145/2769493.2769506>

Work-in-Progress

- The Effectiveness of Types of Notifications to Initiate Aversive Action in Writing Procrastination
- Mindfulness State Tracking with a Mobile Device

ACTIVITIES

Feb 2018	A speaker at IIC International Seminar, Building a Safe Online Environment for Children
Jan 2015	A technical reviewer: Cocos-2d-X by Example, PACKT publishing 2015
Nov 2015	A technical reviewer: Cocos-2d-X Cookbook, PACKT publishing 2015
Oct 2015 – Dec 2017	A president of SMU Lyle Toastmaster club.
March 2012	A speaker at UTCC's national mathematics and science for high school teachers conference 2012