

Jonathan Pascual

Curriculum Vitae

Education

- Spring 2012 – **Master of Science, Electrical Engineering**, *University of Hawaii at Manoa*, non-thesis track, expected graduation in December 2017.
- Summer 2014 **IJST Program**, *Kanazawa Institute of Technology, Ishikawa prefecture, Nonoichi*, Japanese language program – communication, technical speaking, and culture.
- Graduated **Bachelor of Science, Electrical Engineering**, *University of Hawaii at Manoa*.
Fall 2011

Proposed Masters Project

- Title *Gamification of First Year Introduction to Engineering Course*
- Supervisors Professor Jill Nakatsu & Professor David Garmaire
- Description Development and restructuring of first year engineering course using gamification. Gamification is the use of game elements/design to non-game contexts. Our approach includes concepts and methodology in game design to create an engaging experience to encourage the desire to learn and problem solve while applying engineering design.

Other Projects

Github Repositories – <https://github.com/gitten>

Tor Research – Analysis of Tor anonymous network node's resistance to deanonymizing attacks, utilizing the open source Shadow network simulator and Tor plugin.

Applications of Numerical Methods – Developed basic programs in Matlab and PYTHON implementing Finite Difference, FDTD, Moment Method, and Finite Element Method for solving electromagnetic problems (i.e. transmission lines, wire antenna, etc).

Med-E-Bed Project – Interdisciplinary (Electrical/Mechanical) group project for development of a working proof-of-concept hospital bed for use in a neonatal intensive care.

Micro-Post Cellsorter – Design and fabrication of micro-fluidic device using temperature sensitive hydrophilic/hydrophobic (PNIPAM) to tune passive sorting of biological cells by diameter. Undergraduate junior/senior project.

MIPS Processor Emulation – Implementation of basic pipe-lined MIPS processor on an FPGA board using VERILOG. Undergraduate sophomore project.

Experience

Web/Software Related

- 2016– **Software Contractor**, Remote.
- Ongoing
 - Clean up and documentation for existing bot/chat client code base in Python
 - feature additions to improve application usability
- 2015–2016 **Website Contractor**, UNIVERSITY OF HAWAII SYSTEM, Office of Sustainability, Oahu, Hawaii.
- Simple Github website creation and maintenance for an annual sustainability award for students and faculty

Degree Related

- Early 2014–Present **Research Assistant**, UNIVERSITY OF HAWAII AT MANOA, COLLEGE OF ENGINEERING, Dean's Offices, Oahu, Hawaii.
- Assisting development of workshops and teaching materials in engineering for teachers in middle and high school
 - Teaching assistant for ENGR 101, an introductory course for first year engineering students
- 2010–2013 **Research Assistant**, UNIVERSITY OF HAWAII AT MANOA, COLLEGE OF ENGINEERING, Hawaii Center for Advanced Communications, Oahu, Hawaii.
- Antenna design and simulation with industry CAD tools, HFSS and Agilent ADS
 - Antenna and RF circuit prototyping and testing. Gained experience with the use of circuit board milling machines

Awards

- 2014 **Summer Foreign Language Area Studies (FLAS) Fellowship** Recipient
– Utilized for study abroad program in Japan, Kanazawa Institute of Technology
- 2014 **University of Hawaii at Manoa Pacific Asian Center for Entrepreneurship Business Plan Competition, 3rd Place** – Med-E-Bed Project

Skill Sets

- Basic C, VERILOG, Autocad Inventor, \LaTeX , PURESRIPT
- Intermediate PYTHON, Agilent ADS, Emacs, EMACS LISP, Gnu/Linux, ELIXIR, Nerves, CLOSURE, ELM
- Advanced Matlab, Ansys HFSS

Languages

- English **Native Speaker**
- Japanese **Low Intermediate** *Conversational, some technical and formal situational skills*

Interests

- Programming
- Martial Arts
- Gaming
- Learning Piano
- Paragliding
- Japanese Language