

# Jonathan Pascual

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## *Curriculum Vitae*

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### 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

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### Proposed Masters Project

- Title *Gamification of First Year Introduction to Engineering Course*
- Supervisors Professor Jill Nakatsu & Professor David Garmire
- 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.

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### 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.

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## 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

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## 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, 3<sup>rd</sup> Place** – Med-E-Bed Project

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## Skill Sets

- Basic C, VERILOG, Autocad Inventor, L<sup>A</sup>T<sub>E</sub>X, PURESRIPT
- Intermediate PYTHON, Agilent ADS, Emacs, EMACS LISP, Gnu/Linux, ELIXIR, Nerves, CLOSURE, ELM
- Advanced Matlab, Ansys HFSS

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## Languages

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

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## Interests

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