Nicholas Chung

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EDUCATION

Bachelor of Science in Electrical Engineering, UCLA **Jun. 2017**
- GPA: 3.50

Coursework to be completed as of **Mar. 2017**
- EE: Digital Control of Physical Systems
- CS: Fundamentals of Artificial Intelligence

Coursework completed as of **Dec. 2016**
- CS: Modeling and Simulation, Computer Science I/II, Discrete Structures, Intro to Algorithms
- EE: Design Capstone, Digital Signal Processing, Intro to Digital Systems, Control Feedback Theory, Graph Theory, Analog Circuits, Speech & Image Processing

PROJECTS

Project Member **Orchestra Anywhere** **Oct. 2016 - Mar. 2017**

Final project for systems design capstone course using localization and gesture recognition to play music.
- Built multi-threaded TCP/IP network using Python and C to interface Intel Edison's and MATLAB
- Refactored 500 lines of Python and C code to improve readability and documentation (using Git)
- Implemented, tested, and debugged gesture recognition based on user input through an IMU
- Supported real-time gait-tracking development combining open-source software and windowing

Team Lead **IEEE: Advanced Projects** **Oct. 2016 - Present**
- Integrating radio, IMU, and microcontroller modules to build a mini-quadcopter
- Tested and debugged individual modules regarding SPI, I^2C, and low-side switching
- Designed a 2-layer PCB using EAGLE to compactly contain surface-mount components

Project Member **IEEE: NATCAR** **Sept. 2014 - Mar. 2015**
- Built components of the line-following car, including an H-bridge, AFE sensors, and a wave rectifier
- Designed and printed a PCB using EAGLE to process input sensory data from a line sensor

EXPERIENCE

Sensors Engineer **Northrop Grumman** **Jul. 2018 - Present**
- Integrating cRIO and PC hardware with high-speed centrifuge to gather metrics on accelerometers
- Worked with lead software engineer to develop a LabView suite for tuning and testing gyroscopes
- Wrote 500+ lines of SQL and MATLAB to mine data from Oracle database and analyze trends on combinations of sensor parameters
- Collaborated with off-site and on-site teams to manage scheduling through GANTT charts

Embedded Software Engineer **Northrop Grumman** **Jul. 2017 - Jun. 2018**
- Wrote 1000+ lines of MATLAB to automate Simulink test suite and custom report generation, improving labor efficiency by 40%
- Worked with software lead to design project development infrastructure in ClearCase
- Re-baselined legacy code to be compatible with new GreenHills RTOS
- Generated bi-directional traceability matrices using DOORS
- Compiled and peer-reviewed software design document

Team Member **Project Premonition** **Nov. 2015 - Oct. 2016**

Microsoft research aimed at detecting pathogens prior to outbreaks using drones and mosquito traps.

- Translated existing MATLAB code to Simulink block diagram for easier controller simulation
- Researched potential applications of a Kalman filter to supplement the PID code in Pixhawk

Student Intern **EPSS Lab at UCLA** **Jun. 2016 - Oct. 2016**

- Developed schematics and pcb layouts for various component libraries following IPC standards
- Debugged and collected measurements while testing various circuit boards

LEADERSHIP

LA PDP Chapter Lead **Northrop Grumman** **Oct. 2017 - Present**

- Coordinate Lunch & Learn sessions to disseminate technical information to newer employees
- Head two site councils and support their professional development activities

VP of Operations **IEEE-HKN: Honors Society** **Sept. 2015 - Jun. 2016**

- Supported officers with weekly meetings and clarification of responsibilities
- Coordinated Q/A panels, department townhalls, and professional-development workshops

SKILLS

- **CS**: Python, C++, Git, LaTEX, HTML/CSS
- **EE**: MATLAB, Simulink, EAGLE Schematics, LabVIEW, Altium, Logisim