

Christopher Villalpando Estrada

129 Tosca Terrace, Santa Cruz, CA 95060
(619) 948-1435 | chvillal@ucsc.edu

Education:

M.S. Computer Engineering - Computer Networks <i>University of California, Santa Cruz</i>	Santa Cruz, CA	2017 - 2019 (Expected Graduation: Sept 2019)
B.S. Computer Engineering - Robotics & Control <i>University of California, Santa Cruz</i>	Santa Cruz, CA	2014 - 2017

Computer Skills:

Operative systems:	Windows (XP, Vista,7,8,10), Linux (Ubuntu, CentOS), MacOS
Languages:	C, Python, Java, C++, Assembly
Software:	Solidworks, MatLab, Xilinx, Eagle, Cadence Allegro/Capture, LabView NI, Wireshark
Certifications:	CompTIA A+ (2011-2014), Amateur Radio License - Extra

Relevant Courses:

Analysis of Algorithms	Electrical Circuits	Computer Networks
Operative Systems	Signals & Systems	Network Programming
Artificial Intelligence	Microprocessor System Design	Network Security
Machine Learning	Mechatronics	Wireless and Mobile Networks
Computer Architecture	Bio-Inspired Locomotion	Wireless Sensor Networks
	Sensors and Sensing Technologies	PCB Design (EDA Tools)

Career Experience

Software Developer Intern - Mission to the Moon

Nokia Bell Labs	Sunnyvale, CA	Summer 2018
<ul style="list-style-type: none">Collaborated with a diverse team of LTE network engineers to adapt an existing Nokia LTE base station for lunar operations.Developed the testing procedures and data acquisition tools (scripts) for the automation of robustness testing.Collaborated with the development of an Operations & Management software tool for a Lunar LTE base station.		

Premises Technician, Uverse

AT&T West	San Diego, CA	2012 - 2014
<ul style="list-style-type: none">Installed and Repaired Internet, Telephone, and Cable TV services.Trained customers in the usage of AT&T devices such as: Remote Control, DVR, Gateway, VOIP.On request: configured email clients, routers, faxes, alarm systems, security cameras, and access points.Operated on the daily: power tools, hand tools, 20 ft ladders, and network tools/meters.		

Academic Project Experience:

WaterTap Sensors - IoT (in progress)

- Project consists in building a wireless sensor network that monitors tap water consumption per outlet in a residential household.
- Designed the system architecture using COTS components, custom wireless protocols, and power efficient radios (LoRa).
- Ongoing work includes building a data sink, an application protocol and a GUI for data ease-of-access.
- Project Sponsored by UCSC Center for Innovation and Entrepreneurial Development - IdeaHUB 2017.

Classification of EEG measurements using A.I. (in progress)

- We developed a signal processing technique for transforming Electroencephalogram (EEG) measurements into "snapshot" images.
- The images were fed into a Convolutional Neural Network (Pytorch Inception V3 model) in order to train the pattern recognition.
- The neural network was able to classify new data samples with 90% accuracy.
- Currently in the process of expanding this work to other electrode-based datasets.

Leadership Experience

Teaching Assistant - Discrete Mathematics (CMPE 16)

University of California Santa Cruz	Santa Cruz, CA	2018 - 2019
<ul style="list-style-type: none">Prepared teaching material and held weekly discussion sections for supplementary lectures, homework and material review.Proctored weekly examinations and graded an average of 400 examinations every 3 weeks. Provided feedback to students.		

Treasurer - UCSC Amateur Radio Club

	Santa Cruz, CA	2018 - 2019
<ul style="list-style-type: none">Regular member for 3 years (2015-2018), elected as Club Treasurer for the 2018-2019 Academic Year.Acquired over \$2600 in funds from University sponsoring organizations for upgrading club radio equipment.Acted as Project Manager for in-club project: Solar Powered Emergency Communications Station (SPECS).		

Hobbies: Sailing (keel boats), operating and experimenting with Ham radio, and building FPV drones.