

Frank Liu

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Technical Skills: Circuits, Python, R, Java, Linux, GRC software for USRP radios, HTML, CSS, Verilog
Interests: Research, Augmented and Virtual Reality, Mobile Health, Hardware engineering, Signal Processing, Project Management

EDUCATION

Arizona State University Tempe, Az	2018 – 2023 (Expected)
Degree: <u>Doctor of Philosophy in Computer Engineering</u>	GPA: 4.0
<ul style="list-style-type: none">Dean's Fellowship; awarded to the top 4% of graduate students who display significant leadership and research capabilities	
University of Washington Seattle, WA	2014-2018
Degree: <u>Bachelor of Science in Electrical and Computer Engineering</u>	Graduated with Honors
<ul style="list-style-type: none">Digital Signal Processing Embedded SystemsIEEE HKN Honors Society, Priscilla and Melvin Wilson Endowed Scholarship, Husky Leadership Certificate, Washington Scholar	
UC Berkeley San Francisco, CA	Summer 2016
<ul style="list-style-type: none">Summer quarter: Classes taken - Python and Big Data, Biostatistics	GPA: 4.0

EXPERIENCES

INDUSTRY	RESEARCH	PROJECTS
National Taiwan University Taipei, Taiwan Software Engineer, IoX Center Research Assistant July 2018 – August 2018 <ul style="list-style-type: none"><u>Award of Excellence:</u> Significant contributions in shipping android application SoberComm, allows alcohol dependent individuals and their family members to monitor alcohol usageExtensive version control and debuggingAdvised by Professor Bing You Roxy Device Seattle, WA Startup Intern January 2018 – March 2018 <ul style="list-style-type: none">Lead generation and public outreach for customer acquisitionBuilding, assembling, and QA testing of Roxy Device hardware devices Microsoft Redmond, WA Consultant / Educator Nov 2017 – January 2018 <ul style="list-style-type: none">Creating labs, lessons and course content for the "Introduction to Device Programming" EDX (MICROSOFT COURSE) [DEV295X] using Microsoft's IOT Pack for Raspberry Pi for audience of thousand+ students Verizon Wireless Bellevue, WA Systems Performance Intern January 2017 – March 2017 <ul style="list-style-type: none">Supported Systems Performance/Radio Frequency engineers in evaluating and improving areas of poor coverage using internal SP / RF toolsCollected service measurement data to optimize the network, reduce lost calls, and ineffective attempts UW Hyperloop Team Seattle, WA Power Electronics Team Member Nov 2016-Jan 2017 <ul style="list-style-type: none">Hands-on experience in building Hyperloop PodTeam placed 4th in United States, 6th in the World at International SpaceX Hyperloop Competition	ASU Meteor Studios Tempe, Arizona Graduate Research Assistant August 2018 - Present <ul style="list-style-type: none">Research Direction: Improving Virtual/Augmented reality experience with Spatial Audio and HapticsAdvised by Professor Robert Likamwa UW UbiComp Lab Seattle, WA Undergraduate Research Assistant March 2017-June 2018 <ul style="list-style-type: none">Independent Study: RF2DSense; paper, powerless RFID touch surfaceWorking with PhD Hanchuan Li on IDCam: a project to bridge online and real world shopping with AR and RFID: Wrote algorithm for signal mapping of AR headset and RFID tags UW Medicine Seattle, WA Computer Science Research Assistant Nov 2015-Jan 2017 <ul style="list-style-type: none">Worked with Professor Aaron Lee on a project using twitter data to predict epidemics: Utilized Python, R libraries to visualize and analyze months of twitter data to show frequency of tweets over timeLeveraged (SQL, Amazon S3 Cloud, Azure Virtual Machine) to manipulate and wrangle data UW Department of EE Seattle, WA Undergraduate Research Assistant: Mar 2015-Oct 2015 <ul style="list-style-type: none">Created a live transmitter & receiver that plotted, saved data in real time for Professor John Sahr's radar and remote sensing lab	IdeaHacks 2016 2017 <ul style="list-style-type: none">Developed a smart mat that sent texts if weight was on it at UCLA's hardware hackathon – 2016Developed smart trash bin with various sensors, and presented for Finals - 2017 Facebook LGBT Hackathon participant 2015 <ul style="list-style-type: none">Contributed and developed a chrome extension that kept people on task when surfing the web: http://bit.ly/1jgAHbk Seattle Give Camp participant 2015 <ul style="list-style-type: none">Helped revamp nonprofit's website: hungerintervention.orgOld Website: hungerintervention.org/index.html Adventures of Little Cricket and Friends 2018 <ul style="list-style-type: none">Self-Published Book - https://tinyurl.com/littlecricket

LEADERSHIP

SunHacks Organizing Team - Marketing <ul style="list-style-type: none">Lead marketing campaigns selling out tickets for 300+ participants; Organized the largest hackathon in Phoenix Area; SunHacks, ASU's 36 hour hackathon	August 2018 – November 2018
UW Advanced Robotics Seattle, WA Executive Board Member Team Member <ul style="list-style-type: none">Annotate Meetings/ weekly sprints, Coordinate 90 members, Raised over 18,000 in funding through philanthropy efforts and sponsorshipsRefiller Robot Lead; Design and CAD reviews; wrote embedded software (C, C++,Arduino) for Robot control systemsSummer 2018 Placed 3rd in International Regionals Summer 2017 Placed 31st out of 241 at International DJI Robomasters competition in Shenzhen, China	July 2017 – July 2018 March 2017 – July 2017
Violinist in the University Washington Symphony Orchestra: <ul style="list-style-type: none">Served as Second Principal, played in both first violin and second violin sectionsPerformed in a sold-out show in Meany Hall	2014-2015 seasons
Youngest violinist in the Seattle Philharmonic: <ul style="list-style-type: none">Aired on King Fm Radio 98.1: August 26th 9pm to 10:30pmPerformed in Benaroya hall	2015-2016 season

TEACHING

University of Washington Seattle, WA Grader/TA for Introduction to Circuits Class (EE 215) <ul style="list-style-type: none">Established curriculum with Professor Tai-Cheng Chen/ Gordon Farquharson/ Karl Bohinger to teach entry level circuit designProvided additional office hours for struggling students and helped them review fundamentals i.e. circuit concepts, etc.Wrote homework solutions and graded class homework every week	October 2016-March 2017 March 2018 – June 2018
Coding with Kids Redmond, WA Classroom Instructor <ul style="list-style-type: none">Taught coding course curriculum for scratch at local elementary schools, Managed classroom of 8-14 elementary students	March 2017- June 2017