CALVIN YU

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EDUCATION

Columbia University *Sep 2021 – May 2026 (expected)*
Doctor of Engineering, *Electrical Engineering*

Georgia Institute of Technology *Jan 2016 – Dec 2018*
M.S., *Computer Science (Computational Perception and Robotics)*

Purdue University *Aug 2009 – May 2013*
B.S., *Biomedical Engineering*

PROFESSIONAL EXPERIENCE

Stellartech Software Engineer *May 2019 – Present*
Stellartech Research Corporation - Milpitas, CA

- Create end to end software test infrastructure, test plans, test data, and setup test equipment for embedded application testing
- Perform software bug fixes and feature improvements on real-time embedded system applications for medical RF generators
- Write code that interfaces with system hardware such as LCDs, touch panels, A/D converters, multiplexers, FPGAs, EEPROMs

Philips Healthcare System Test Engineer II *Feb 2016 – May 2019*
Philips Volcano - Sacramento, CA

- Create test beds, test plans, test data, and setup test equipment for test execution in an agile test environment
- Led the design and feasibility study of Test Automation Framework that interconnects hardware and software
- Analyze and review system, software, and hardware requirements to ensure coverage and testability
- Develop Automation Test tools using C# and Python to enhance GUI testing, performance testing, and reduce manual testing time by 40%
- Built an independent testing harness/client and wrote integration tests in Python and C++ using Google Test to exercise and verify ultrasound imaging library and vessel detection algorithm
- Built Python-callable interfaces to existing DLLs to increase unit and integration test coverage
- Led the development of an internal software tool to collect data from intravascular ultrasound experts

Beckman Coulter Systems Engineer *Feb 2015 – Feb 2016*
MicroScan - West Sacramento, CA

- Work as Core Team Member representing V&V throughout the product development process
- Lead and facilitate meetings for the Defect Review Committee to accurately resolve defects as well as perform risk analysis with proper justifications
- Assist in development of Automation Test tools for testing commercial products
- Collaborate with internal departments to create test beds and equipment for formal and informal testing

Siemens Healthcare Software Test Engineer *Oct 2013 – Jan 2015*
Molecular and Microbiology Business Unit - West Sacramento, CA

- Develop software verification test plans and perform verification and validation testing for commercial software (e.g. LabPro, BML, LBI, IDM, PD3)
- Create a script file to automate the installation of LabPro software to reduce test setup time by 20%
- Perform Manual Testing and Automation Testing using Test Complete and Selenium
- Write and review software specifications for internal tool development

Purdue University Undergraduate Research Assistant *May 2012 – Oct 2012*

NeuroProstheses Research Lab – West Lafayette, IN
– Fabricated a new surgical system that minimizes rodent brain tissue injury
– Installed and learned the fundamentals of Metrohm Autolab Systems

Dr. Nan Kong's Research Lab – West Lafayette, IN
– Modeled and optimized hospital discharge rates of traumatic brain injury patients to enhance cost-effectiveness
– Conducted sensitivity analysis using Virtual Basic to determine the most cost-effective screening policy to treat and prevent chlamydia

COOK Medical R&D Engineering Intern   *May 2011 – Aug 2011*
MED Institute – West Lafayette, IN
– Synthesized and verified chitosan nanoparticles for delivering anti-cancer drugs (i.e. Paclitaxel)
– Planned, designed, and built an apparatus to test for thrombogenicity of catheters
– Collaborated with the Product Discovery staff to draft patent applications for new catheter designs
– Analyzed experimental data and prepared/presented monthly technical reports about project status

PROJECTS
RxVR

rxvr.com
– USC Hacking Virtual Medicine Hackathon Finalist in October 2015 for using virtual reality as a way to support post-surgery patients' road to recovery
– Built a Google Cardboard application to simulate a virtual post-surgery party where the user celebrates with other post-surgery patients

HUGGS (Have U Gone Grocery Shopping)

morehuggs.co
– Won 3rd place during the 2014 Sacramento Startup Weekend event for pitching and prototyping an on-demand, crowdsourced grocery delivery service aimed to support and empower the local community
– Built a mobile application using Javascript where users can shop from local Sacramento grocery stores

NeuroStimulator (powered by Intel Edison chipset)
– Built a preliminary brain stimulator for the Intel IoT competition in January 2015

Viva El Feto (Low Cost Fetal Heart Rate Monitor)
– Developed an algorithm using C++ and MATLAB to detect cardiac events and calculate fetal heart rate with 90.9% accuracy

LEADERSHIP ACTIVITIES
- Toastmasters, President   *June 2014 – Feb 2016*
– Biomedical Engineering Society   *Sep 2010 – May 2013*

CERTIFICATIONS
– SAFe 4.0 Agilist
– LabView
– Toastmasters Competent Communicator Award
– Toastmasters Competent Leader Award

CORE TECHNICAL SKILLS
Software: MATLAB, MiniTab, PSPICE, TestComplete, Visual Studio, Linux, uCOS, RTOS
Laboratory: Spectrophotometry, Chromatography, PCR, Cell Culture, ELISA, Blood Handling, SEM Operation
Languages: C, C++, C#, HTML, Javascript, Java, SQL, Python
Tools: HP-ALM, Documentum, Arduino, Eclipse IDE, SeleniumHQ, DOORS, JIRA, Git, Google Test
Libraries: NumPy, SciPy, OpenCV, TensorFlow, Keras, Boost