Binh Nguyen

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Education

University of California, San Diego — La Jolla, CA
B.S. Bioengineering: BioSystems, Minor: Cognitive Science — 2018

Skills

Programming:	Python, MATLAB, C/C++, JavaScript, SQL, UNIX, Git, Apache Subversion, LaTeX
Libraries:	NumPy, Matplotlib, Pandas, Scikit-learn, Jupyter, Selenium, TensorFlow, Keras, Django
Systems/Hardware:	LabVIEW, Simulink, Raspberry Pi, Arduino, PCB, Soldering, Signal generators, Oscilloscopes

Experience

Acutus Medical, Inc. — Carlsbad, CA

Software & Systems Quality Engineer II — March 2022 — Present

- Improved efficiency of quality compliance for thousands of itemized BOMs using web automation via Selenium
- Wrote and executed software test cases for multiple projects and produced detailed bug reports in Jira
- Supported cross-functional teams by developing software quality test plans using Scrum methodologies

R&D Systems Engineer — August 2019 — March 2022

- Built prototyping tools to integrate 3D magnetic tracking capability for next-generation systems
- Developed MATLAB application for reading, monitoring, and displaying real-time UDP data
- Trained predictive machine learning models using TensorFlow to detect disturbances in EGM signals
- Performed root-cause analysis on electrical-mechanical systems using digital signal processing techniques
- Standardized production systems using data-driven insights and reduced number of complaint reports

Clinical Science Engineer Intern — July 2018 — August 2019

- Developed semi-automatic 3D heart segmentation algorithm for statistical and clinical analysis
- Created MATLAB visualization of conduction velocity vectors to identify repetitive arrhythmic patterns
- Automated the retrieval, parsing, and organization of data from animal studies and clinical trials
- Gained unique perspective on how to turn theoretical algorithms into useful clinical applications

Cartilage Tissue Engineering Lab, UCSD — La Jolla, CA

Undergraduate Researcher — June 2017 — August 2017

- Reconstructed 3D tissue images from 2D cross-sectional images using Digital Volumetric Imaging in MATLAB
- Collaborated with graduate students and lab faculty to implement 2D and 3D cell segmentation techniques
- Elucidated cell variability in superficial and deep zones and found disparities in manual cell counting
- Validated the feasibility of automated cell counting against manual methods in human articular cartilage
- Presented research findings at the 2017 UCSD Summer Research Conference to diverse audience members

Lab Assistant — August 2016 — April 2018

- Conducted tissue culture generation, dissection, and staining for research experiments
- Processed and analyzed micro-CT images of bovine cartilage samples
- Followed and revised Standard Operating Procedures to ensure safety and quality standards

Coursework

Python for Data Analysis, Machine Learning, Data Structures, Algorithms, Statistics and Probability
Numerical Analysis, Analog Design, Circuits and Systems, Signal Processing
Bioinstrumentation, Biomedical Optics, Biomechanics, Human Physiology