

# BINH NGUYEN

[binhtnguyen95@gmail.com](mailto:binhtnguyen95@gmail.com) · 209.406.6378 · [linkedin.com/in/binh-t-nguyen](https://www.linkedin.com/in/binh-t-nguyen)

## Education

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**University of California, San Diego**

B.S. Bioengineering: BioSystems, Minor: Cognitive Science

La Jolla, CA

2018

## Skills

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Programming: Python, MATLAB, C/C++, JavaScript, SQL, UNIX, Shell, Git, Apache Subversion, L<sup>A</sup>T<sub>E</sub>X  
Libraries: NumPy, Matplotlib, Pandas, Scikit-learn, Jupyter, Selenium, TensorFlow, Keras, Django  
Systems/Hardware: LabVIEW, Simulink, Raspberry Pi, Arduino, PCB, Soldering, Signal generators, Oscilloscopes

## Experience

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**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 magnetic tracking capability for next-generation systems
- Developed MATLAB application for reading, monitoring, and displaying real-time UDP data
- Trained predictive machine learning models in Python to detect disturbances in IQ 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 algorithms to automatically segment heart anatomy into spatial regions for clinical research
- 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
- Optimized ECG signal using multi-modal methods to improve signal-to-noise ratio

**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
- 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

- Assisted with tissue culture generation, dissection, and staining for research experiments
- Processed and analyzed micro-CT images of bovine cartilage samples

## Coursework

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