

Education

University of California, San Diego

M.S. Electrical and Computer Engineering
Specialization in Applied Physics

expected December 2020

B.S. Mathematics

June 2015

B.S. Physics

Work Experience

Backend Engineer at Bloom Health

October 2019 – January 2020

- Developed backend server software for Bloom Health's wellness iOS app.
- Leveraged AWS to run Swashbuckle server and process image data submitted by users.
- Orchestrate Docker containers to process image data and return results to users.

Lead Software Developer at CureMetrix Inc.

August 2016 – September 2019

- Contributed to the successful FDA submission for a class 2 medical device, *cmTriage*.
- Maintained Traceability Matrix and developed Software Requirement Specifications.
- Packaged cancer detection software for deployment on Amazon Web Services (AWS).
- Maintained client accounts and ensured delivery of accurate and dependable results.
- Lead development team in feature integration and bug fixes for our cancer detection product, *cmAssist*.
- Guided interns in developing features for our products, including status tracking and security upgrades.
- Planned, architected, and deployed secure software to external clients using Amazon Web Services.
- Maintained the integrity of training and testing data that included over 2 million medical images and pathology data.

Data Scientist at CureMetrix Inc.

November 2015 – August 2016

- Researched and implemented techniques to detect and classify anomalies in medical images using neural networks.
- Used TensorFlow to train CNN, FRCNN, and FCN networks.

Research Assistant (Intern) at CureMetrix Inc.

12 – 23 October 2015

- Assisted the CureMetrix research team with data curation and storage solutions.
- Wrote a software tool that estimates the amount of fibroglandular tissue visible in a mammogram.

Gymnastics Instructor at University of California, San Diego

2011 – 2018

- Planned and lead weekly classes for adults and children.
- KnockAround Camp counselor.

Canoe Guide at Northern Tier High Adventure Base, Ely, Minnesota

June 2011 – August 2011

- Planned and guided over 400 miles of canoe treks.
- Responsible for the safety of scouts and chaperones.

Software Development

Programming Languages and Frameworks

Python, Relational Databases (MySQL, SqlServer, PostgreSQL, Amazon RDS), NoSQL, Java, C

DevOps

Cloud Computing Platforms

Amazon Web Services: 4 years experience developing client facing healthcare applications.

Google Cloud Platform, Digital Ocean: Familiarity with platforms. Used for personal projects.

Certifications

Linux Security Fundamentals (LFS216) – The Linux Foundation

Operating Systems

Experienced using with Debian based GNU/Linux.

Familiar with OpenSuse, ArchLinux, MacOS, and Windows based systems.

Teaching

Coding Instructor

for Building Your First Website Workshop at Django Girls of San Diego 2 March 2019
Instructed students for the one day "Build Your First Website" event hosted by the Django Girls, San Diego. This was an inclusive, free coding camp focused on teaching programming to underrepresented groups.

Teaching Assistant

for Physics Lab: E&M, Waves, and Optics at Physics Department, UCSD Winter 2015
Led class demonstrations, guided students in completing experiments, and graded lab reports.

Guest Lecturer

for Honors Astronomy at Concordia University, Irvine, CA October 2014
I was invited to lead a research project for the Honors science students of Dr. John Kenney at the Concordia University in Irvine, CA. As a guest lecturer I taught students how to observe double stars. The lecture was followed up with an observation session and a published paper: "Undergraduate Observations of Separation and Position Angle of Double Stars Ary6AD And Ary6AE at Manzanita Observatory", Hoffert et al., Proceedings for the 33rd Annual Meeting of the Society for Astronomical Sciences, Eds. Warner, Buchheim, Foote, and Mais, pg. 225, May 2014.

Teaching Assistant

for Astronomy 299 at Cuesta College, San Luis Obispo, CA Summer 2013
Guided research projects for the class, involving making astronomical observations and writing lab reports.

Teaching Assistant

for Astronomy 299 at Cuesta College, San Luis Obispo, CA Summer 2012
Gave lectures on the birth and death of the universe, the HR Diagram, and historical methods of observing the stars.

Teaching Seminars and Certifications

Troubleshooting Office Hours: Asking the Right Questions – UC San Diego Teaching + Learning Commons 14 November 2019

Mapping Knowledge Gaps – UC San Diego Teaching + Learning Commons 7 October 2019

Presentations

"Two Horizons: Seeing Double?" Presentation on Kerr geometry for PHYS 161, Black Holes. 17 March 2015.

"Observing Double Stars". Mt Wilson Student Research Initiative, 11-13 July 2014.

"A Student Teacher Prospective on Research Seminars". The Maui International Double Star Conference, 8-10 February 2013. University of Hawaii's Institute for Astronomy, Pukalani, Maui, Hawaii. <https://www.youtube.com/watch?v=aeM0rcr1cgE>

Publications

Books

Double Star Astrometry; Collaborations, Implementations, and Advanced Techniques. Eds. Weise, Genet, and Wallen. Collins Foundation Press. Santa Margarita, CA. Copyright 2015.

The Double Star Reader. Eds. Clark, Genet, Johnson, Wallen, and Weise. Collins Foundation Press. Santa Margarita, CA. Copyright 2013.

Papers

"CubeSat Astronomical Telescopes and Research in the 2020s", Genet, Russell, et al., White Paper submitted to the National Academies Astronomy 2020 Decadal Study, July 10, 2019. "International Speckle Interferometry Collaboration", Weise, et al., Speckle Interferometry of Close Double Stars; Special Issue of the Journal of Double Star Observations. Eds. Clark, Genet, Wallen, Legg, Genet. Chapter 9. Copyright 2015.

"Mt Wilson Meets the Double Image Micrometer", Weise, E., et al., The Journal of Double Star Observations, vol. 11, no. 3, pg. 170, 2015.

"Kitt Peak Speckle Interferometry of Close Visual Binary Stars", Genet et al., Proceedings for the 33rd Annual Meeting of the Society for Astronomical Sciences, Eds. Warner, Buchheim, Foote, and Mais, pg. 77, May 2014.

"Undergraduate Observations of Separation and Position Angle of Double Stars Ary6AD And Ary6AE at Manzanita Observatory", Hoffert et al., Proceedings for the 33rd Annual Meeting of the Society for Astronomical Sciences, Eds. Warner,

Buchheim, Foote, and Mais, pg. 225, May 2014.

“Close Double Star Speckle Interferometry Program”, Proceedings for the 32nd Annual Meeting of the Society for Astronomical Sciences, pg. 61, May 2013.

“Second Annual Apple Valley Double Star Workshop”, Brewer et al., The Journal of Double Star Observations, vol. 10, no. 3, pg. 245, 2014.

“Apple Valley Double Star Workshop”, Brewer et al., The Journal of Double Star Observations, vol. 10, no. 3, pg. 160, 2014.

“A Novel System for Classifying Binary Orbital Solutions”, Weise, E., and Genet, R., The Journal of Double Star Observations, vol. 11, no. 1S, pg. 219, 2015.

Volunteering

Eagle Scout

Industry and Entrepreneurial Chair, Jacobs Graduate Student Council

Student Assistant Editor of the Journal of Double Star Observations (<http://jdso.org/>)

Volunteer Dog Foster, Labs And More Dog Rescue, San Diego, CA.

Volunteer, Pacific Crest Trail Association.

Cochair, Revelle Community Outreach

Volunteer and Principal Member, Roger’s Community Garden

June 2009

October 2019 - Present

January 2014 - January 2015

October 2016 - December 2018

August 2017 - Present

September 2011 - September 2012

2011 - 2015