Nicholas Jaber

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EDUCATION

University of California, Irvine Major: **Physics** Concentration: **Computational Physics**

Minor: **Information and Computer Science** Graduation: **June 2021**

Objective: **Obtain a Ph.D. in Experimental Condensed Matter Physics**

Career Goal: **R&D in quantum computing and other applications of low-temperature physics**

PROFESSIONAL EXPERIENCE

UCSF School of Dentistry- Ho Laboratory San Francisco, CA

Biomedical Researcher Nov. 2015 – Dec. 2019

· Prepared and analyzed salivary, kidney and prostate stones with correlative microscopy techniques

· Analysed literature pertaining to biomineralization and postulated about routes to mineralization

· Presented weekly to scientists and surgeons on my own research and worked closely with PI and postdocs

· Second author on accepted abstract for American Urological Association which was accepted April 1st 2018

UCI Department of Physics and Astronomy- Taborek Laboratory Irvine, CA

Condensed Matter Researcher Sep. 2019 – Present

· Operated, and restored sub 1.2 Kelvin Cryostatic Chamber and used interferometry to measure drop curvature

Sigray- Imaging System Design and Manufacturing Concord, CA

Research Fellow Mar. 2018 – Sep. 2018

· Worked with Advanced Light Sources (ALS) at Lawrence Berkeley National Laboratory

UCI Department of Physics and Astronomy- Peer Tutor and Learning Assistant Irvine, CA

Certified Learning Assistant Dec. 2018 – Present

· Taught and designed problems for kinematic, optics, python and boolean algebra, focused on group learning

Cagent Vascular- Biomedical Engineering Startup Irvine, CA

Specialist in Scanning Electron Microscopy Nov. 2017 – Mar. 2018

· Lead the electron microscopy team for the Serranator ensuring production quality was accurate to design

· Met with biomedical engineers and manufacturers to ensure engineering specifications were followed faithfully

TECHNICAL SKILLS

Imaging Techniques: Micro-CT, Scanning Electron Microscopy, Backscattered Electron Spectroscopy, Energy Dispersive Spectroscopy, X-ray Absorption Spectroscopy, X-ray Fluorescence Spectroscopy, Auto-Fluorescent Microscopy, Light Microscopy, Inductively Coupled Plasma-Laser Ablation, Confocal Microscopy

Image processing: AVIZO, GIMP, FIJI, ImageJ, Correlative Microscopy, Pore Isolation, Watershed

Laboratory Skills: Cryo-Static maintenance, plasma cleaning, plasma coating, low pressure vacuum systems

Programming Experience: Python (2.5 years), Java (1 year), Matlab (9 months), C++ (6 months)

Webcrawler processed 50,000 UCI sites avoided traps and created an efficient search using custom page rank

VOLUNTEERING

UC Ignite (Pilot Program) San Francisco, CA

Program Leader and Founder Jun. 2016 – Sep. 2019

· Organized with Acalanes High School, Stanley Middle School and BSA Troop 200 to challenge 10 young scholars to think critically and engage with material during a week long program for 3 summers

· Students as young as 12 years old have mastered basic understanding of optics, stoichiometry, reaction kinetics