

Sion Avakian

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EDUCATION

University of California, Irvine

Bachelor of Science in Computer Science, GPA: 3.5

Glendale College

Associate of Science in Mathematics, GPA: 3.7

Irvine, CA

June 2019 – June 2021

Glendale, CA

June 2016 – May 2019

EXPERIENCE

Undergraduate Researcher

July 2020 – September 2020

UC Irvine Institute for Money, Technology, and Financial Inclusion

Irvine, CA

- Utilized various web scraping tools/techniques such as Selenium, Scrappy, and BeautifulSoup to gather relevant data.
- Built and maintained twitter bots to serve as test subjects for how they contribute to the spread of dis- and misinformation.
- Co-authored a blog post published on The Consortium of Social Science Associations (COSSA), summarizing the modules and toolkits developed by the team and distributed to over 100 universities, governing associations, centers, and institutes.

Undergraduate Researcher

September 2019 – June 2020

National Science Foundation - UC Irvine Informatics and Data Science Lab

Irvine, CA

- Presented findings to faculty concerning how community organizations use data to champion their cause and how this experience helped our team, as computer science students, to understand ethics in computer science.
- Performed case studies on non-profits and consolidated data into a database using FileMaker Pro.
- Co-authored a scholarly publication regarding ethics in computer science curricula and undergraduate experiences.

Software Engineer, Full Stack Intern

June 2018 – September 2018

Youth Policy Institute

Los Angeles, CA

- Sustained and improved organization's website working directly with the product manager and lead developer, resulting in a 15% increase in the number of fellows.
- Produced and maintained a follow-up system for current and past fellows using MERN stack.
- Adopted MongoDB for data storage.

PROJECTS

RSNA Pneumonia Detection

April 2021 – June 2021

UC Irvine

- Used Python, Numpy, PyTorch, and Sklearn to detect a visual signal for pneumonia in medical images.
- Utilized a large dataset of over 30,000 DICOM images.
- Accomplished over 85% validation accuracy on Kaggle's competition data.

COVID-19 mRNA Vaccine Degradation Prediction

October 2020 – December 2020

UC Irvine

- Used Python, NumPy, Pandas, TensorFlow, Keras, and Sklearn to predict RNA molecules' likely degradation rates.
- Achieved maximal time efficiency with a combination of fast algorithms and quality hardware.
- Successfully completed the Kaggle competition with 80% prediction accuracy.

Facing Digital Extremism in a Pandemic Modules/Toolkits

July 2020 – September 2020

UC Irvine

- Scraped Twitter, Reddit, Facebook, and other social media platforms for relevant data.
- Developed modules and toolkits, taught in undergraduate/graduate courses aimed to identify and combat dis- and misinformation.
- The modules and digital toolkit were promoted through events and social media channels to over 30,000 UC Irvine students and faculty, as well as shared with national organizations and other universities to address extremism in all its forms.

Phoenix Robotics

January 2019 – May 2019

Glendale College

- Built a public service humanoid robot to guide students on campus.
- Utilized Arduino, Python, and Raspberry Pi for a functioning robot in a team of 15.
- Raised north of 20,000 USD for the project.
- Organized and held meetings for 15+ team members, lead an agile work environment.

Timeliness - Time Management Application

June 2017 – September 2017

Personal Project

- Programmed a time management app using Swift.
- Coordinated the entire project from scratch.
- Designed and implemented the UI/UX using Sketch and Photoshop.

SKILLS

Programming: Python, C/C++, JavaScript, R, Swift, Arduino, Git, TensorFlow, PyTorch, Pandas, NumPy

Web: React, HTML/CSS

Languages: English, Armenian, Farsi (Persian)