

MICHAEL MELKONIAN



EDUCATION

University of Southern California May 2024
Master of Science in Computer Science GPA: TBD
Relevant Courses: TBD
(I will begin my graduate studies at USC beginning August 2022)

Cal Poly Pomona May 2022
Bachelor of Science in Computer Science GPA: 3.53
Relevant Courses:
Software Engineering - Data Structures and Advanced Algorithms - Machine Learning - Numerical Methods - Formal Languages & Automata - Database Systems - Artificial Intelligence - Social Computing - Mobile Application Development

SKILLS

Libraries /Pkg's /Fwk's:	(Java: lang, io, util, swing) (Python: matplotlib, numpy, BeautifulSoup, scikit-learn, TensorFlow) (C++: iostream, iomanip) (Dart: Scaffold, flutter_html, flutter_https, Starflut) (JS: node, express, React, Node.js) (HTML/CSS: Bootstrap4, SCSS)			
DB's:	(SQLite) (MongoDB)			
Tools & Software:	Visual Studio, Eclipse, Android Studio, JIRA, MARS, GitHub, Excel, Microsoft Word, FIGMA, AutoDesk, VirtualBox			

LEADERSHIP

Capgemini RISE Program August 2021
Completed 4-day program in consulting an employee engagement tracker for AutoMobex, a mockup company for given time frame.
Accomplished this through FIGMA and Proto.io designs.

AWARDS

Andre Bullock Engineering Scholarship May 2021
Award: \$2,375
Received the Andre Bullock Engineering Scholarship (Dean's Scholarship) for excellence in coursework as an engineering undergraduate.

ORGANIZATIONS

MAXIMIZING ENGINEERING POTENTIAL (MEP)
Regularly attended biweekly workshops to learn about graduate programs, resume building, and internship opportunities.

SCIENCE EDUCATIONAL ENHANCEMENT SERVICES (SEES)
As a member of the STEM mentoring program, I provided general personal and professional guidance to under-represented undergraduate minorities.

RESEARCH EXPERIENCE

- Research Assistant** September 2021-Present
Cyber Adptive Learning Systems Laboratory Pomona, CA
 - Assisting Dr. Ericsson Marin in collecting deep/dark-web links to send through cyberinfrastructure pipeline
 - Designing and developing a darkweb crawler using BeautifulSoup Python package in collecting and storing relevant cyberthreat forum and marketplace data
 - Implementing supervised learning models, support vector machines (SVM) and logistic-regression (LOG-REG) to create the classification component in the pipeline to categorize cyberthreat-associated forums and marketplaces
 - Leveraging social network analysis (SNA) and decision trees to model information diffusion relative to hacker communities to investigate influential and topological patterns
- Simulation Developer** November 2020-March 2021
Northrop Grumman Collaboration Project Pomona, CA
 - Tested simulation software (i.e. Webots, V-REP, and GAZEBO) to use the most optimal results for our final simulation
 - Based on the amount of simplicity of the software and amount of open-source code WEBOTS provided, it was decided to proceed with this software in applying towards both UGV and UAV
 - Tested and developed simulation of Unmanned Ground Vehicle with C++ alongside open-source code to functionalize infrared sensors and individual wheel motors

PROJECTS

- Opshuns - Android App** December 2021 - January 2022
Personal Project Los Angeles, CA
 - Created responsive Android application where users can calculate potential profits/losses with specified stock ticker
 - Developed through Android Studio IDE using Dart to build front-end and backend of application with implementation of Scaffold and MaterialApp
 - Designed web-scraping program within application to collect stock-related data: stock price and daily price fluctuation percentage
 - Upon deployment, application has attracted over 50 downloads in less than a 2-week time frame
- PolyPathway.com** July 2021-August 2021
Academic Project Los Angeles, CA
 - Lead a team of 5 to develop a student campus navigation web application that provides students an easier and more precise path to their designated on-campus location
 - Used Jira to distribute work to individuals of the group according to their unique competencies in order to increase workflow efficiency throughout a 5 week development period
 - PolyPathway works with Google Maps API in storing unique coordinates for both building structures and notable landmarks to allow the user to simply input concise destination entries

Unmanned Rocket Science

February 2019-May 2019

Whittier, CA

Academic Project

- Used 3-D designing software (Fusion 360) to design and print both the nose cone and payload of a [1:40] scale model rocket
- Soldered a 9 Degrees of Freedom (9DoF) sensor to the rocket's motherboard and calibrated the system through Arduino IDE with C++ for proper magnetometer and accelerometer readings
- 9DoF sensor was put through a series of drop tests prior to the launch to compare with expected calculations where a successful reduction of error rate from 42% was brought down to 8%