PONTHEA ZAHRAII

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EDUCATION

Bachelor of Science, Computer Science, Neuroscience Minor May 2024
Master of Science, Electrical Engineering and Computer Science May 2025
Chapman University, Fowler School of Engineering, Orange, CA 3.86 GPA

RELEVANT COURSES

- Data Structures and Algorithm (C++)
- Algorithm Analysis
- Introduction to Data Science (Python)
- Data Communication and Computer Networking
- Database Management (SQL)
- Object Oriented Programming (Java)

TECHNICAL SKILLS

- Python
- Selenium
- Tensorflow/Keras
- Java
- SQL
- C++
- Scikit Learn

CERTIFICATIONS

Oracle Cloud Data Management Foundations Associate In Progress
CITI Biomedical Research Certification November 2021
CITI Social and Behavioral Research Certification November 2021

PROFESSIONAL EXPERIENCE & RESEARCH

Chapman University, Orange, CA February 2022 – Present
Machine Learning and Adaptative Technology, Fowler School of Engineering
Lab Researcher

- Worked closely with industry professionals to run various regression models to make stock market predictions
- Scrapped data off NASA's mars rover logs using Selenium to assist on NASA project
- Analyzed data using SQL and python to find patterns in treatment databases and produce research papers
- Managed and organized all ongoing projects for the lab

Chapman University, Irvine, CA December 2021 – May 2022
Institute for Interdisciplinary Brain and Behavioral Sciences, Rinker Health Science Campus
Lab Assistant

- Ran EEGs in coordination with Float Pods on test subjects ages 13-80 to collect data
- Oversaw team of 6 to delegate and work on projects for efficiency
- Debriefed test subjects on their informed consent rights and purpose of the study

Chapman University, Orange, CA September 2021 – Present
Schmid College of Science and Technology & Fowler School of Engineering
Instructional Lab Assistant

- Managed ticketing system using Jira to troubleshoot and assign access to students, staff, and faculty
- Automated routine tasks/responsibilities to eliminate chance of manual error and improve time efficiency by 90%
- Supervised email account servicing students, staff, and faculty
- Communicated updates on assignments with facilities manager for campus projects

RELEVANT PROJECTS

Dating App Simulator Model May 2023

- Developed a convolutional neural network to accurately predict the sex of individuals and generate attractiveness scores for images, enhancing the understanding of image-based attraction assessment
- Demonstrated problem-solving skills by effectively troubleshooting and modifying the project when faced with unexpected challenges, leveraging trial and error to overcome roadblocks and achieve desired outcomes
- Conducted simulations of algorithms utilized by popular dating apps to forecast attraction levels based on images, providing valuable insights into the underlying mechanics of image-based attractiveness prediction

NFA to DFA Converter January 2023

- Constructed a Finite State Automaton reader/writer using vectors and maps in C++
- Used advanced coding techniques to recursively distinguish deterministic states in code through detailed classes and object-oriented programming

Deathify Website and Database November 2022 – December 2022

- Deployed Spotify companion app with functional front and backend that provides the death date and other info for an artist and automatically creates a playlist containing artists that died on the same year
- Accessed data using Python's Spotify and Genius APIs, integrated MySQL database to store it
- Gained understanding of product life cycle, including app design, development, and delivery
- Scrapped data off the internet using Selenium in Python to build a unique dataset for the application

Panther Cage - Shot Bot May 2022 – October 2022

- Top 5 finalist in Chapman University's Annual Panther Cage Entrepreneurship Match
- Pioneered system design decisions for robot structure
- Wrote code in Arduino C to develop a remote-control Arduino robotic car
- Generated pitch to persuade investors to fund in product

Game of Life March 2022

- Troubleshooted in C++ to code Conway's Game of Life
- Developed 3 different game modes for Conway's Game of Life in C++, in addition to various forms of input and output
- Mapped the game out before developing to avoid bugs in the software

Database Simulation May 2022

- Designed student/faculty database simulation implementing binary search trees, stacks, generic classes, and inheritance in C++
- Accomplished through extreme programming to promote collaboration and communication

Spotify Dataset Exploration May 2022

- Explored the relationship between various variables using supervised, clustering, and dimensionality reduction models
- Asked and answered questions about the dataset through the creation of various models
- Prepared a short presentation analyzing the results found during the data exploration

Crazy Eights November 2021

- Implemented a crazy eights card game simulation utilizing inheritance and linked lists in Java
- Collected and returned the statistics of the simulation to the user given the user specified number of simulations ran
- Outlined program through real life simulations of intended design

ACADEMIC ACHEIVEMENTS & ACTIVITIES

Institute of Electrical and Electronics Engineers, Vice President Fall 2023 – Current
Computer Science Club, Vice President Spring 2022 – Current
Panther Cage Award – Shot Bot October 2022
Undergraduate Neuroscience Society, President Fall 2022 – Current
Iranian Student Cultural Organization, President Fall 2021 – Current