ROBIN SIMPSON

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Education

California Polytechnic State University   **September 2023 – May 2025**
Bachelor of Science in Computer Engineering w/ Minor in Astrophysics   *San Luis Obispo, CA*

Experience

NASA   **January 2024 – May 2024**
Data Analytics Intern   *Remote , CA*
- Empower decision making by leveraging data assets within AETC and designing tools to enhance capabilities for business analytics and data driven solutions.
- Steamline data and communication pipelines for AETC's facilities and workforce.
- Improve evaluation and test data access within the organization.
- Ensure data security and facilitate appropriate data access for designated personnel both in and outside of organization.

Lawrence Livermore National Laboratory   **June 2023 – August 2023**
Software Engineer Intern   *Livermore, CA*
- Contributed to the development of Darc, a system powered by FastAPI, Angular, and Docker. This initiative manages petabytes of test data, streamlining data archiving and search functionalities to align with the U.S. DOE standards.
- Focused on backend development, designing RESTful API endpoints and implementing unit/integration tests. The collective effort, marked by over 1000 code contributions, aided in refining Darc's architecture and enhancing stability.
- Supported the shift from MarkLogic to MongoDB & Elasticsearch, advancing Darc's management and retrieval.
- Engaged in Agile methodologies to drive streamlined development and deployment processes. Collaborated in weekly Scrum and Sprint meetings, ensuring efficient ticket assignments and fostering team synergy on a team of 7.

Lawrence Berkeley National Laboratory   **June 2023 – August 2023**
Information Technology Intern   *Berkeley, CA*
- Participated in file analysis, file carving, malware decomposition, network traffic analysis, and host forensics.
- Assisted the IT team via ServiceNow and Crowdstrike in updating 5000 outdated and out-of-compliance systems .
- Supported the HelpDesk and Endpoint Management Team with troubleshooting, on-boarding, and maintenance tickets throughout all 22 laboratory departments.
- Collaborated on a team of 3 fellow interns under the OMNI Program to research cybersecurity vulnerabilities presentable to the Department of Energy.

Argonne National Laboratory   **June 2022 – August 2022**
Computing Intern   *Lemont, IL*
- Developed a web application that geolocated and visualized 500 critical infrastructure sites in the SF Bay Area.
- Utilized Cytoscape.js, Deck.gl, Heroku, and Python to generate a graphical 3D arc and heat map rendition of datasets.
- Collaborated with an intern colleague to integrate a Unity 3D simulation demonstrating the cascading impacts of infrastructure failures.

Research

California Polytechnic State University CLA   **October 2023 – Present**
AI/ML Undergraduate Researcher   *San Luis Obispo, CA*
- Supporting the research team in performing keyword searches and web scraping to aggregate a substantial image dataset, facilitating the identification of robotic functional areas in the hospitality industry.
- Working alongside industry-leading annotators like Scale AI, assisting in the development of labeling frameworks and ensuring accurate data labeling for subsequent analysis.
- Aiding in training and validating machine-learning models by utilizing Python and various open-source libraries, ensuring precise identification and analysis of functional areas where robots can collaborate in the hospitality sector.
- Preparing to author a research paper for submission to the 2024 National Conference on Undergraduate Research.

California Polytechnic State University COSAM   **September 2023 – December 2023**
Undergraduate Astronomical Data Researcher   *San Luis Obispo, CA*
- Conducting comprehensive research on galaxies and cosmology using LSST datasets from the Rubin Observatory.
- Applying data analytics using Python and implementing machine learning techniques to decipher intricate patterns in vast astronomic datasets, ensuring precise and impactful findings.
- Collaborating with a team of astronomers and scientists to analyze and interpret results, presenting findings on research papers and conferences.

Technical Skills

Languages: Python, Java, C, C++, HTML, CSS, JavaScript, SQL
Developer Tools: VS Code, Git, MongoDB Compass, CI/CD, Powershell
Technologies/Frameworks: Linux, GitHub, Gitlab, FastAPI, Django, RESTful, UnitTest, TDD, ElasticSearch