Cal Hargis

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EDUCATION

BS in Computer Science Apr 2024
Brigham Young University Provo, UT

- Relevant Coursework: Software Engineering, Android Development, UX Design, User Interface Software, Software Design & Testing, Algorithm Design & Analysis, Machine Learning.

EXPERIENCE

Software Engineer Intern May 2023-Dec 2023
Family Search Lehi, UT

- Developed robust production code for FamilySearch, leveraging Java Apache Spark, to efficiently extract hint files from a large-scale AWS database, improving data extraction processes.
- Collaborated closely with cross-functional teams in an Agile workflow to understand project requirements, ensuring alignment between code development and business objectives.
- Conducted thorough testing and debugging of developed code using version control technologies, ensuring high-quality and error-free production implementations.
- Utilized AWS monitoring and logging tools to track and optimize the performance of data extraction processes, ensuring reliable and consistent results.

Research Assistant Apr 2020-Dec 2022
Brigham Young University Provo, UT

- Developed and implemented machine learning algorithms in Python to analyze and interpret research data.
- Conducted extensive data preprocessing and cleaning, ensuring the integrity and quality of input datasets for accurate model training while creating and maintaining a comprehensive codebase.
- Utilized libraries such as NumPy, Pandas, and Scikit-learn to implement statistical analyses and machine learning techniques.
- Performed preparation of 2 separate research papers and presentations by providing technical insights and visualizations generated from machine learning analyses.
- Collaborated in weekly team meetings to discuss progress, challenges, and potential enhancements to machine learning models, fostering a productive research environment.

PROJECTS/RESEARCH

Machine Learning Analysis of Dynamic‑Dependent Bond Formation in Trajectories with Consecutive Transition States

- Published in Wiley Online Library, a reputable scientific journal, demonstrating expertise in machine learning and data analysis.
- Performed all machine learning, data collection, and created graphs for data visualization for one of two molecules studied in the aforementioned research article.

Machine Learning Classification of Disrotatory IRC and Conrotatory Non-IRC Trajectory Motion for Cyclopropyl Radical Ring Opening

- Published in Royal Society of Chemistry, one of the most highly respected journals in Chemistry, demonstrating expertise in machine learning and data analysis.

SKILLS

Proficient in Java, C++, C, Git, AWS, Python, JavaScript, HTML, CSS.