

# Ahmad Melad Mayaar

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## EDUCATION

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### University of California, Berkeley

Berkeley, CA

Bachelor of Arts in Data Science (Specialization: AI & ML), Minor in Computer Science

May 2024

Relevant Coursework: Probability for Data Science, Data Structures and Algorithms, Advanced Algorithms Theory, Machine Learning, Finance, Artificial Intelligence and Data Engineering

## EXPERIENCE

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### Data Science Intern

Berkeley, CA

Data Discovery - Lead Water Service Line (LWSL) Prediction

Aug 2023 – Dec 2023

- Compiled an extensive dataset of **300k** rows from Zillow and the US Census Bureau using LXML and Scrapy.
- Led the UI design and data development team for predicting lead service line using Python, predictive modeling techniques, and MapBox API, achieving **88%** accuracy in lead prediction and **20%** more user engagement.
- Honored with the prestigious Data Science Insights Award from UC Berkeley | **View project report.**

### Software Engineering Intern

Berkeley, CA

CereVox AI

Aug 2023 – Dec 2023

- Maximized JSON data processing efficiency by **2x** through the application of JavaScript Object-Oriented Programming principles, establishing foundational rules for the parser.
- Achieved a **5%** enhancement in text conversion efficiency by developing the back-end custom parsing engine in Python, Node.js and JavaScript.
- Obtained a remarkable **15%** increase in system stability by conducting code reviews, testing, and debugging in partnership with interns.

### Data Science Undergraduate Research Assistant

Berkeley, CA

NanoTechnology

Jun 2023 – Dec 2023

- Developed SQL-GUI interface to organize and access large datasets; increasing data efficiency by **8%**.
- Gained **10%** improvement in data analysis efficiency by utilizing visualization techniques through Matplotlib and seaborn.
- Improved data privacy by anonymizing sensitive data and implementing access controls to protect research data.

### Software Engineering Intern

Sacramento, CA

Sacramento County Cemetery Website

Jan 2022 – May 2022

- Transferred cemetery data to an online database with **100%** accuracy, implementing streamlined deployment.
- Performed front-end and back-end web development to reduce the website's initial load time by **30%**.
- Presented searchable features to the website, receiving a **9/10** client rating.

## PROJECTS

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### AI Driven Pac-Man

Spring 2024

- Led the development of 4 AI techniques (state-space search, probabilistic inference, reinforcement learning, logical inference) in Python, improving Pac-Man's problem-solving efficiency.
- Improved game navigation and agent decision-making using search algorithms and reinforcement learning models (Value Function, Q learning, Approximate Q learning), resulting in a **2x** increase in game completion rate.
- Introduced advanced probabilistic inference models and logical reasoning algorithms to strategically allocate resources and optimize path-finding, resulting in a **30%** reduction of game time.

## SKILLS

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**Programming Languages:** Java, Python, C, C++, C#, JavaScript, TypeScript, Swift

**Data Science :** NumPy, Pandas, Scikit-Learn, TensorFlow, PyTorch, Matplotlib, MongoDB, Tableau, Power BI, GraphQL, NLP, SQL, NoSQL, PostgreSQL, Data Mining, Databricks, ArcGIS, Jira, R, BI Dashboards, SAAS, ETL

**Web Development:** HTML, CSS, Bootstrap, CI/CD, React, Angular, WordPress, REST, Agile, Middleware

**Developer Tools:** Docker, Kubernetes, Rest APIs, AWS, Git, Kafka, Unix, Linux, Distributed Systems, DevOps

**Spoken Languages:** Fluent in English, Pashto, Farsi, Dari; Intermediate in Arabic