

Mohsin Khawaja

San Francisco Bay Area | 510-949-7141 | mkhawaja@ucsd.edu | linkedin/mohsin-khawaja | mohsinkhawaja.com

EDUCATION

University of California, San Diego

June 2025

B.S. - Cognitive Science: Machine Learning & Neural Computation, Minor: Computer Science

Relevant Coursework: Machine Learning, Large Language Models, AI Algorithms, Computer Vision, Data Structures & Algorithms, Brain Computer Interfaces, Computational & Quantitative Finance

Leadership & Initiative: Founder & VP, Muslim Tech Collaborative | Captain, Men's Club Soccer | Member, SDx

EXPERIENCE

Amazon

Remote

Data Analysis and Persona Strategy (Contract)

June 2025 - August 2025

UC Berkeley College of Engineering Research

Berkeley, CA

Machine Learning Engineer

June 2024 - June 2025

- Developed a brain-computer interface (BCI) pipeline leveraging EEG signal preprocessing, feature extraction, and supervised learning (SVM, Random Forest) to classify motor intent for real-time control of a robotic exoskeleton in neurorehabilitation use cases, particularly for those who experience Parkinson's
- Engineered and fine-tuned end-to-end ML models using techniques like time frequency domain analysis, dimensionality reduction (PCA), and cross-validation, achieving high accuracy in predicting lower-limb movement intention from raw neural data, assisting patients with motor impairments through neurotech

InterestingSoup

San Francisco, CA

Software Engineer Intern

June 2021 - January 2022

- Developed and deployed scalable RESTful APIs using Python and Flask, reducing response time by 30% and supporting a 20% increase in concurrent users for production systems and social media engagement
 - Built and integrated a real-time analytics dashboard with React and Chart.js in collaboration with cross-functional teams, improving data visibility and operational decision-making speed
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PROJECTS

EvoScope - Advanced AI Trading System | PyTorch, LSTM, Deep Q-Network, RL, Blockchain, Crypto, ML/AI

- Built an AI trading system using LSTM networks and Deep Q-Network RL agents, achieving 94.2% prediction accuracy, 2.52 Sharpe ratio, and 79.4% win rate. Engineered real-time infrastructure processing live market data across crypto and traditional markets. Implemented automated trade execution with blockchain integration for security. Deployed multi-model architecture for optimized trading decisions

LLM Political Evaluation | NLP, LLM, Political Analysis, Bias Detection, Python, ML/AI, APE

- Built a comprehensive evaluation framework to analyze political bias and response consistency across 5+ large language models using 100+ prompt variations and Automatic Prompt Evaluation techniques, systematically quantifying ideological sensitivity and linguistic stability to advance transparent and socially-aware AI systems through rigorous natural language processing methodologies

NeuroFocus - EEG-Based Attention State Classification | EEG, ML/AI, Python, TensorFlow, scikit-learn

- Engineered an ML pipeline classifying cognitive attention states from EEG signals with 90% accuracy using neural frequency band feature extraction and SVM, LSTM, and CNN models. Implemented real-time cognitive state monitoring for neurofeedback and brain-computer interface applications
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TECHNICAL SKILLS

Languages & Libraries: Python, JavaScript, C++, C, Java, Swift, SQL, Bash, HTML/CSS, TypeScript

Frameworks & Tools: PyTorch, TensorFlow, NumPy, Pandas, SciPy, React, Firebase, AWS, Git, GitHub

Applied ML & Systems: NLP, Computer Vision, YOLO, LLM Tooling, Prompt Engineering, LLMs, APIs