Ammar Ali

ammar.ali2002@gmail.com | Champaign, IL
630-849-9974 | linkedin.com/in/aali02 | github.com/ammar-io

Education

• Bachelors in Brain & Cognitive Science, Minors in Computer Science & Statistics *Aug 2022 - May 2025*
University of Illinois at Urbana-Champaign, College of Liberal Arts & Science

– **Courses**: Artificial Intelligence, Data Analysis with Probabilistic Graph Models, Neural Interface Engineering, Digital Signal Processing, Data Structures & Algorithms, Probability & Statistics for Computer Science, Biostatistics in R, Cognitive Neuroscience Lab with Statistical Parameter Mapping (Matlab)

Experience

• Cloud + AI Intern *Jun 2025 - Present*
RoyalCyber Naperville, IL

– Developed backend for agentic AI receptionist for real-time phone calls.
– Built with **FastAPI, AWS Bedrock, MongoDB, Pinecone**, and **OpenAI**

• Software Engineer *Feb 2023 - Aug 2024*
Disruption Lab at Gies Champaign, IL

– Engineered an **OpenAI-powered chatbot** to support external clients and assist navigation of internal clusters for the UIUC Data Science Research Services; built using **Python, JavaScript, Langchain** and **Steamlit**.
– Constructed parsing functions to transform training documents to .txt and embeddings, facilitating efficient search in a vector space. Used **pytest** & **GitHub Actions** for automated testing protocols.

• Machine Learning Engineering Intern *Jun 2024 - Aug 2024*
University of Illinois Urbana-Champaign Remote

– Trained **YOLO-V8** object detection model to identify recyclable materials on UIUC campus waste bins in real time. Implemented with **Python, Pytorch, HuggingFace, Docker** & **Github Actions**.
– Assisted data preprocessing (image augmentation, labeling) & hyperparameter tuning for faster detection and reduced annotation errors by more than **20%** with **OpenCV**.

• Field Data Engineering Intern *Jun 2023 - Nov 2023*
SpotGenius Lombard, IL

– Enhanced video monitoring & ticketing systems in parking lots. Introduced crop zones for refined license plate detection at high speeds; improving **License-Plate Recognition (LPR)** for anomaly detection and secure real-time streaming with **Python-scripts & Azure**.
– Gained proficiency in data streamlining & processing for multi-camera integration in **Azure Cloud & FortiMonitor**.

• Software Development Director *Aug 2022 - Aug 2023*
Illini VEX Robotics Champaign, IL

– Directed the development of a **Brain-Computer Interface(BCI**) car, using **EEG** signals to enable movement in a remote-control car. Developed **K-Nearest Neighbors (KNN)** clustering algorithm for direction classification.
– Researched and implemented template matching with **OpenCV**, to improve the real-time detection accuracy of on-vehicle cameras in motion.

Projects

• VR-Neurofeedback Therapy *Aug 2023 - Present*
EEG-Based Emotional State Classier with Tensorflow

– Engineered real-time neurofeedback system with **Python & ROS** for emotional state detection from **EEG** signals. Integrated VR using **C# & Unity**, via **UDP**. Tested ML models like **SVM, Random Forest**, & **CNNs (TensorFlow)**

Technical Skills

Languages: C++, Python, R, Javascript, Java, SQL, TypeScript, HTML+CSS
Frameworks & Libraries: NumPy, Pandas, Scikit-learn, OpenCV, PyTorch, TensorFlow, CUDA, Ray, ROS, Flask
Developer Tools: Git, Github, UNIX, Docker, Kubernetes, Node.js, CMake, Unity
Cloud/DB: AWS, Azure, Google Cloud, Power BI, MongoDB, Snowflake, Pinecone