AHMED ULLAH

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EDUCATION

The University of Texas at Arlington – College of Engineering **Arlington, TX**
Bachelor of Science, in Computer Science August 2020 – May 2024
AWARDS: Dean's List (2021); Presidential Honors Scholar (2020 - 2024)

TECHNICAL SKILLS

FULL STACK: C#, C, C++, .NET, Python, Java, JS, J2EE, GoLang, TypeScript, Angular.js, React.js, CSS, HTML, MongoDB, SQL, PostgreSQL
MACHINE LEARNING/DATA SCIENCE: NumPy, Pandas, Scikit-Learn, cuDNN, TensorFlow/Keras, PyTorch, Matplotlib, Seaborn, Caffe, Tableau
TECHNOLOGIES/OTHER: Azure, AWS, GCP, AJAX, jQuery, Django, OAuth, Git, GitHub, Kubernetes, Docker, Agile, CI/CD, RESTful APIs

EXPERIENCE

Tortoise: An Assistive Smart Glasses System for People with Memory Loss Conditions **Irving, TX**
Founding Machine Learning Engineer October 2023 – Present

- Pitched a new smart-glasses and watch technology project; awarded a grant to lead and develop the prototype to help Alzheimer's and dementia patients.
- Led the training, optimization, and deployment of image classification architectures, including VGGFace2, EfficientNet, & YOLOv9.
- Directed engineers in designing and developing the system prototype, streamlining progress with Agile methodologies.
- Developed a RESTful API server to efficiently handle data transfer between system components with C# and ASP.NET Core.
- Implemented and managed backend services using Python, C# and ASP.Net Core, integrated with SQL for efficient data handling.
- Utilized Docker for orchestration and containerization of microservices, ensuring efficient deployment.
- Applied cutting-edge machine learning techniques to significantly enhance model performance and user experience, using C# for backend integration.
- Leading beta prototype testing stages, aiming to present advancements of Tortoise at the AI in Health Conference in 2025.

NSF Research Experience for Undergraduates (REU) Program **Arlington, TX**
Machine Learning Researcher for the UTA College of Engineering June 2023 – August 2023

- Created an assistive smart glasses prototype for memory loss patients to independently manage grocery needs from home.
- Developed a back-end administration platform with C#, allowing users to take control of prototype features at various levels.
- Trained and deployed YOLOv7/v8 CNNs for grocery item recognition, achieving 93.2% & 82.6% mAP scores on the Freiburg dataset.
- Researched state-of-the-art methods, providing a solid basis for the prototype, cutting 25% of development time and costs.
- Utilized a Raspberry Pi 4B+ and a Raspberry Pi Camera Module v2 for processing and data collection, ensuring seamless UX.
- Conducted hyperparameter optimization for CNN architectures, increasing mAP scores by nearly 60%.
- Led, collaborated with, and directed a team of graduate and undergraduate researchers in an Agile/Scrum environment.

Track Records **Arlington, TX**
Full Stack Developer September 2023 – May 2024

- Collaborated with a team of engineers in empowering users to understand their music streaming habits.
- Developed a unique machine learning music recommendation system via Spotify's BaRT recommendation system architecture.
- Led backend development efforts with C#, enhancing database infrastructure, and implementing data mining techniques.
- Utilized APIs from music streaming services and managed API rate limits to ensure a smooth user experience.
- Assisted the team in developing front-end (website) UX/UI features using React.js (JS and TS), CSS, and HTML.
- Managed version control and collaboration using Git and GitHub, following Agile methodologies for project management.
- Deployed the application utilizing AWS, ensuring scalable and reliable cloud infrastructure, with backend services.

PROJECTS

National Basketball Association Player Worth Classifier December 2022
Sole Machine Learning Engineer

- Built a machine learning model with Scikit-Learn, Pandas, and NumPy to estimate NBA players' value from multiple features.
- Integrated the model with a web-based interface using JavaScript and TypeScript for interactive user input and visualization.
- Optimized the model to identify a player's pay status (under/overpaid), providing insights for player analysis and contract negotiations.

LinkUp: An Event Planning Application for Android April 2022
Sole Developer

- Created a user-friendly social app with Angular.js to easily manage events, simplifying event planning and coordination.
- Improved user experience by adding social media app features like comments, messages, and friends/followers using TypeScript.
- Integrated basic machine learning models to enhance event recommendations, with front-end interaction handled in TypeScript.
- Employed AWS for cloud services, enabling seamless integration and deployment of the application.
- Utilized MongoDB for efficient data storage and retrieval, ensuring high performance and scalability with C#.

College Degree Plan Application November 2021
Sole Developer

- Designed an informative application catering to students, offering detailed information about classes and degree plans.
- Developed backend services using C# and ASP.NET Core, ensuing robust and secure handling of course and degree plan data.
- Leveraged JavaScript to enable users to access specific course section details via an intuitive graphic user interface (GUI).