Avneet Ahuja

Website | LinkedIn | GitHub | aahuja16@asu.edu | 480-791-8055

EDUCATION

M.S. in Computer Science — **May 2025**
Arizona State University, Tempe, AZ — **GPA: 4.00/4.00**
B.S. in Computer Science — **May 2024**
Arizona State University**,** Tempe, AZ — **GPA: 4.00 /4.00**

RELEVANT COURSES

Machine Learning (A+), Data Visualization(A+), Distributed Software Development (A+), Data Structures and Algorithms (A+), Discrete Math (A), Linear Algebra(A+), Probabilities and Statistics (A), Operating Systems(A+), Software Engineering (A), Information Assurance (A+), Assembly Programming (A+), Calculus I, II, III (A+, A, A+).

TECHNICAL SKILLS

Programming Languages: Java, JavaScript, Python, C/C++, Bash Scripting, Scheme, SwiftUI, HTML, CSS, C#
Libraries and Frameworks: AWS, React.js, Next JS, TensorFlow, Scikit-learn, MERN, Tailwind CSS, OpenCV, ROS
Web3: MetaMask, Cartesi, Web3.js, Arbitrum
Databases: MySQL, PostgreSQL, MongoDB, Firebase, ConvexDB

WORK EXPERIENCE

Developer, — **August 2023 – May 2024**
NASA Psyche Mission — **Tempe, AZ**

- Steering continuous advancement of an educational Unity3D game, achieving a ~25% increase in user engagement and a 22% improvement in overall game performance.
- Accelerated project schedule, on pace to finish the project 25 days before initially set finish date.
- Applying advanced game physics mechanics, resulting in a 15% reduction in user-reported glitches and an increase in overall user satisfaction, enhancing the seamless and immersive experience.

Software Developer, — **May 2023 – August 2023**
God's Grace Distributions — **New Delhi, India**

- Facilitated the seamless migration of the company's database to AWS cloud infrastructure, resulting in a 30% reduction in data management costs and increase in data accessibility.
- Automated infrastructure provisioning using AWS CDK, accelerating deployment times by 50%.
- Implemented EC2 instances with bootstrap scripts, enabling 90% faster document conversions and facilitating real-time handwriting analysis, leading to a 15% improvement in data accuracy and efficiency.

PROJECT EXPERIENCE

Real-Time ML System For Form Detection, — **April 2024**
Class Project

- Developed and implemented an LSTM machine learning model achieving 98.59% validation accuracy for detecting correct, too fast, no wrist rotation, and incomplete forms during bicep curls.
- Engineered a portable, handheld system using an Arduino Nano 33 BLE Sense Rev 2 with a 6-axis IMU capable of real-time data processing and feedback, resulting in an efficient and user-friendly training aid.
- Collected and labeled 352 data segments with a 100 Hz sample rate, enhancing motion detection accuracy.

SwiftRide, — **April 2024**
Class Project

- Creating an Uber-like iOS app, leveraging SwiftUI for UI, Firebase for storage, and ViewModel for communication.
- Integrating remote APIs enhances operations, including real-time location updates for passengers and drivers.
- Designing a visually appealing and modular user interface by leveraging SwiftUI's features and incorporating the MapKit framework for mapping functionalities in SwiftRide.

Skribbl.AI, GitHub Link — **March 2024**
Personal Project

- Executed the project independently, utilizing Next.js, Convex, and Replicate for seamless web interaction.
- Orchestrated API integration for AI model calls, achieving over 90% accuracy in image generation.
- Integrated Convex for backend support, ensuring scalability and performance optimization by over 3X.

RentLinkers, GitHub Link — **March 2024**
Hackathon Project

- Collaborated with 3 fellow students to create a decentralized tech rental app leveraging the compute of Cartesi.
- Decreased gas fees by 40% and increased speed by 90% by using Arbitrum as a layer 2 blockchain.
- Implemented an innovative conflict resolution system using DAOs and wagering to reduce conflict rate by 95%.
- Secured 3 prizes in the hackathon, including 1st and 2nd place track finishes and 4th place overall.