# Mustaeen Ahmed

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## EDUCATION

**University of Central Florida**  Orlando, FL
*Bachelor of Science in Computer Science*  *Aug 2023 - May 2027*

## EXPERIENCE

**Software Engineer Intern**  Nov 2025 - Present
*Handshake*  *San Francisco, CA*
- Optimized multimodal pipelines with **LangChain** and **Python**, improving downstream task accuracy by **19%**.
- Applied **diffusion models** for **synthetic data** generation, improving efficiency by scaling dataset size by **300%**.

**Quantitative Software Engineer Intern**  Jun 2025 - Aug 2025
*Morgan Stanley*  *New York, NY*
- Migrated a **C++** quantitative trading app to the web, reducing loading speeds by **50%**, and integrated **Grafana**.
- Developed **Python** pipelines for risk management, integrating market data and improving report quality by **45%**.
- Implemented an interpreter for **Intex Deal Modeling Language**, improving deal processing speeds by **200%**.

**Software Engineer Intern**  Jan 2025 - Mar 2025
*U.S. Department of Transportation*  *Washington, D.C.*
- Built and deployed a scalable web application with **AWS CDK** and **Amazon S3** for real-time data processing.
- Leveraged **RESTful APIs** with **Amazon API Gateway** and **DynamoDB**, reducing backend latency by **54%**.
- Developed a vessel tracking interface, improving port scheduling operations by **28%** and port throughput by **44%**.

**Software Engineer Intern**  Sept 2024 - Dec 2024
*Leidos*  *Orlando, FL*
- Engineered multimodal pipelines with **Transformers**, improving visual-language performance in **LLMs** by **22%**.
- Fine-tuned **vision-language** and **machine learning** models for **pre-training**, increasing efficiency by **37%**.
- Constructed **data scraping** tools with **Python**, automating data collection and increasing productivity by **20%**.

**Software Engineer Intern**  Jun 2024 - Aug 2024
*Darden*  *Orlando, FL*
- Engineered several **Python** applications for automation, saving **400+** work hours and **$10,000+** per quarter.
- Leveraged **OpenCV**, **scikit-image**, and **PyTesseract** for robust **error handling**, reducing error rates by **94%**.
- Performed efficient **data engineering**, decreasing code complexity by **63%** and application runtime by **26%**.

## PROJECTS

**Knight Hacks Monorepository** | *Next.js, React, TypeScript, SQLite, Tailwind CSS, tRPC, Drizzle ORM*
- Architected a website for club registration with **React**, serving **2000+** students and **20+** company sponsors.
- Facilitated development of new tooling architecture, increasing **DX** by **80%**, and developer efficiency by **90%**.
- Implemented a multi-purpose chat bot with **25+** useful commands to serve a club chat of **5000+** members.

**AgentNow** | *Next.js, React, TypeScript, Google Cloud, Python, FastAPI, Eleven Labs, RAG, Machine Learning*
- **Placed 2nd** out of **20+** competitors for **ServiceNow's Agentic AI** challenge at Knight Hacks 2025.
- Deployed a **retrieval-augmented generation** API with **Google Cloud**, reducing enterprise costs by **80%**.
- Built a tool to assist enterprise clients with product selection, consultants with sales, and sales analytics.

**GuitAR** | *C#, Unity, Meta SDK, Algorithms, Audio Classification*
- **2nd place winner** of the **Best Overall** category at Knight Hacks 2024, surpassing **102** submitted projects.
- Architected an educational mixed reality application for learning and practicing the guitar, with **15+** lessons.
- Designed an **audio classification** algorithm which converts audio frequencies to binary data for note validation.

## TECHNICAL SKILLS

**Languages**: Python, JavaScript, TypeScript, R, C, C++, C#, Java, Go, HTML, CSS, GLSL, SQL
**Frameworks**: React, Angular, Spring Boot, Next.js, Node.js, Express.js, Tailwind CSS, tRPC
**Libraries**: scikit-learn, PyTorch, TensorFlow, NumPy, Pandas, Flask, Django, OpenCV
**Tools**: Git, Amazon Web Services, Microsoft Azure, Google Cloud Platform, Redis, Docker, MongoDB, Jupyter Notebook, Linux