HARSHIT JAIN

(582) 203-9755 ◇ harshitj.cs@gmail.com ◇ linkedin.com/in/harshitjain17 ◇ github.com/harshitjain17

EDUCATION

The Pennsylvania State University, University Park PA Graduation: Dec 2024
Bachelor of Science in Computer Science | GPA: 3.7/4.0 | Teaching Assistant @CodePath | Projects
Course: Data Structures & Algorithms, Operating Systems, Object-Oriented Programming, Linear Programs, Database Systems
Certifications: Microsoft: Azure AI Engineer Associate, Golang, AWS, Machine Learning, CodePath: Advanced SWE

TECHNICAL SKILLS

Programming Languages: Python, Golang (Go), Java, C/C++, JavaScript/TypeScript, SQL, Shell scripting
Frameworks: Streamlit, Node.js, React.js, Next.js, LangChain, TensorFlow, Scikit-Learn, GraphQL, RESTful APIs, Git
Softwares: AWS, GCP, Azure, MS SQL Server/PostgreSQL, Linux/UNIX, Docker, Postman, CI/CD (Jenkins, Cloud Build)

PROJECTS

JobAssistAI - Microsoft Hackathon [Project Link] *[Microsoft Azure AI, RAG Pipeline, Python]* Mar 2025

- Engineered an end-to-end Azure solution with OpenAI, Document Intelligence, SpeechSDK, AI Search, and RAG models to automate report generation, transcription, insights storage, and AI-driven search for optimized job coach decision-making

WORK EXPERIENCE

Software Engineer Jan 2025 - Present
Hughes Network Systems, LLC (Aeronautical Team) Washington, DC

- Built low-latency algorithm in Go, mapping flight paths to live weather grids to predict IFC-impact zones via spatial indexing
- Rewrote 4k+ LOC legacy Python monitoring system in Node.js to reduce latency and boost flight telemetry accuracy 95%
- Architected automated GCS bucket archive solution; slashed SLA sync time from 20+ mins to <1 min to eliminate bottlenecks
- Built a Python-based flight reconciliation system with multi-source matching to automate billing and prevent revenue leakage

Software Engineer Intern Aug 2024 - Dec 2024
Materials Research Institute (2DCC-MIP Team) University Park, PA

- Engineered an AI-powered video platform (Next.js, AWS) enabling 10+ U.S. institutes to streamline research video analysis
- Reduced video processing latency by 20% by optimizing GraphQL APIs and integrating DynamoDB for faster video retrieval
- Designed a secure authentication flow (AWS Cognito, API Gateway) to enable controlled CRUD access for research datasets
- Deployed a Python AI pipeline (LangChain, Pinecone) to enable intelligent search across 1k+ videos using vector embeddings

Software Engineer Intern May 2024 - Aug 2024
Hughes Network Systems, LLC (Aeronautical Team) Washington, DC

- Automated an AWS-to-BigQuery pipeline (Python) with strict row-level validation and reduced manual intervention by 95%
- Delivered SQL views and a Python-based analytics pipeline to power Delta Airlines' flight insights for 61k+ flights monthly
- Built a Python-based automated invoicing system (GCP) to drive multi-stream revenue capture for flight operations at scale

Software Engineer Intern Jan 2024 - May 2024
Materials Research Institute (2DCC-MIP Team) University Park, PA

- Delivered an AI-driven video pipeline using AWS Lambda to automate transcription and tagging for 1,000+ hours of content
- Integrated LLMs (GPT-4, Claude 3) into a LangChain chatbot to enable RAG-based retrieval for 800+ queries monthly
- Built a video classification system with AWS Rekognition to automate speaker identification and cut manual tagging by 75%
- Developed an automated CI/CD pipeline for serverless research apps, ensuring rapid deployments and 99.9% uptime reliability

Software Engineer Co-op May 2023 - Dec 2023
VIAVI Solutions Inc. (PNT Team) Washington, DC

- Built a distributed Python/C++ test framework for PNT products to cut testing time by 70% and speed up market delivery
- Redesigned a multi-tiered system to microservices architecture to resolve SCPI bottlenecks and boost response time by 40%
- Executed 35+ SCPI compliance tests to reduce product validation time from 2 weeks to 3 days for critical product releases

Software Engineer Intern May 2022 - May 2023
Materials Research Institute (2DCC-MIP Team) University Park, PA

- Built scalable React.js application with 50+ features and Jest test coverage to accelerate data analysis for 200+ scientists
- Integrated MS SQL Server to manage data from 900+ instruments and structured it across 18+ BCNF-normalized tables
- Built a Python-based ETL pipeline to automate data extraction, transform logs, and sync research data to a cloud warehouse
- Research: Re-architected Python library for Raman Fitting Model (try here) to implement spectra deconvolution, automate data preprocessing, and optimize export functions, reducing analysis time by 40% and improving model accuracy