CHAHAT KALSI

MS CS @ Stony Brook University Aug'23 - May'25

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Technical Skills

Languages: C, C++, Java, Python, JavaScript, TypeScript, SQL, HTML/CSS
Frameworks and Libraries: Node.js, React.js, Vue.js, Express.js, D3.js, Spring Boot
Databases: PostgreSQL, MongoDB
DevOps, Tools and Technologies: Docker, Kubernetes, Kafka, Spark, Jenkins, Postman, Jira, Confluence
Cloud Platforms: AWS, Google Cloud

Experience

Center for Excellence in Wireless and Information Technology — **Stony Brook University, NY**
Research Assistant — *Jun'24 - Present*

- Developed a PyTorch-based segmentation framework for real-time vegetation detection in drone imagery, integrating attention mechanisms and achieving IoU of 0.70 on TTPLA.
- Performed hyperparameter tuning and ablation studies to optimize performance.

Goldman Sachs — **Bengaluru, India**
Software Development Intern — *Feb'23-Jun'23*

- Automated firm-wide Cash Gap report generation using Apache Spark (Java) for data processing and Apache Kafka for data streaming.
- Developed a Java Spring Boot MVC backend to streamline the Cash Gap report approval process.
- Implemented comprehensive unit tests using Mockito and JUnit.

Summer Analyst Intern — *Jul'22-Sep'22*

- Developed a Java Spring Boot application to integrate static CSV data into the database.
- Performed unit and integration testing; ensured adherence to SDLC standards with comprehensive documentation through Confluence and Jira.

Nottingham Trent University — **Chandigarh, India (Remote)**
Research Intern — *Jul'21-Mar'22*

- Led a project on ADHD assessment, denoising EEG signals using MATLAB and visualizing data with Python.

Personal Projects

Serverless AWS File Processing Platform — **Jul'24**

- Developed a full-stack web application using React.js for the frontend and AWS Lambda for the backend, handling dynamic content management with secure file uploads to AWS S3 and data storage in DynamoDB.
- Utilized AWS CDK for infrastructure automation, provisioning Lambda, S3, DynamoDB, and EC2 with strict IAM policies to enhance security
- Architected and deployed a serverless system that automates EC2 instance launches for task processing using AWS SDK v3, ensuring secure and scalable operations without hard-coded credentials.

Data Analytics and Visualization Platform — **May'24**

- Built a full-stack web app using D3.js (frontend) and Flask (backend) to visualize 5000 years of solar eclipse data.
- Created interactive Choropleth maps, donut charts, and radial bar plots for eclipse patterns, and visualized attribute correlations with scatterplots, MDS similarity plot, and a time series for eclipse magnitudes.
- Enabled dynamic filtering and direct interaction with the visualizations to explore data insights.
- Integrated PostgreSQL for scalable data storage and query management.

Education

Stony Brook University — **New York, United States**
Master of Science in Computer Science, 3.78 / 4.0 GPA — *Aug'23 - May'25 (Expected)*

- **Awards:** Graduate Tuition Scholarship, Graduate Fee Scholarship

Panjab University — **Chandigarh, India**
Bachelors of Engineering in Computer Science, 9.04 / 10.0 GPA — *Aug'16 - Aug'20*