

Shubham Shrivastava

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EDUCATION

Purdue University

West Lafayette, IN

B.Science in Computer Science & B.Science in Applied Mathematics

EXPERIENCE

IBM

May 2024 – Present

Software Engineer I - Full Time

Durham, NC

- Developed the **on-prem UI** for OSO enabling customers to manage **cold storage solutions** in digital assets.
- Implemented secure **HTTPS** connections for the UI with **Nginx** and **OpenSSL** for prod readiness & security.
- Developed an **ingress** controller to centralize and secure API endpoint communications, streamlining operations.
- Deployed the UI in a **Kubernetes** environment, using **Minikube** and **Ingress** for development and testing.
- Developing a **multi-tenant** on-prem solution to cut costs, boost client security, and enable resource sharing.

Sleep Number Corporation

Dec 2023 – May 2024

Software Engineer - Contract

Minneapolis, MN

- Migrated Sleep Number's payment provider from **Shift4 to Adyen**, integrating with **Oracle Siebel CRM**.
- Developed **function apps & APIM policies** on **Azure** for POS functions like void and gift card transactions.
- Programmed in **Node.js & TypeScript** to ensure POS functions with reduced transactions failures.
- Managed data flow between Siebel and Adyen API using **Azure Core Function Tools**, enhancing efficiency.
- Automated Azure log monitoring with **Terraform** and crafted **KQL** queries for enhanced operational insights.
- Performed **Jest-based** functional testing on payment endpoints for improved performance and reliability.

IBM

May 2023 – Aug 2023

Software Engineering - Internship

Durham, NC

- Prototyped IBM OSO's in **React.js**, enhancing various personas workflow for offline crypto transactions.
- Deployed the UI in **Docker** for dev experience, with **SSL certificate** handling and strict **TLS** for security.
- Refined the backend processes with **Python, Terraform, & Nginx**, optimizing document transfer across LPARs and boosting API efficiency.

PepsiCo

May 2022 – Aug 2022

Machine Learning Engineer - Internship

Plano, TX

- Analyzed feature stores to select an optimal **ML platform**, enhancing pattern recognition capabilities.
- Designed **MLOps network architecture** to integrate PepsiCo with Teradata Subscription.
- Programmed **Neal Analytics** DevOps Workspace for autonomous code execution and deployment in PROD.

Fidelity Investments

Jan 2022 – Apr 2022

Software Engineering - Internship

Durham, NC

- Moved the pricing page from **ECS to EKS**, using **Nginx** for improved rehydration and maintenance processes.
- Upgraded Pricing Non-Prod web app from **Angular 11 to 13**, enhancing Angular CLI operations and validation.
- Implemented over 100 **Cucumber Integration Tests** with **Maven**, increasing system robustness and reliability.

RESEARCH

RCAC High-Performance Computing Lab | Dr. Wen-Wen Tung, Ph.D. & Erik Gough Jan 2024 – Apr 2024

- Developed a new **R script** computing environment for RCAC labs using **Magpie** for **Hadoop management**.
- Streamlined **Hadoop setup** and cluster job management to enhance data-intensive analysis.
- Designed **Slurm** submission scripts for interactive **Hadoop/MR** jobs, showing proficiency in **HPC** solutions.

Deep Learning for Chaotic Weather Dynamics | Dr. Di Qi & Dr. Wen-Wen Tung Ph.D. Jan 2023 – Apr 2024

- Developed **AI models** to analyze and forecast weather and climate patterns within the atmosphere-ocean system.
- Ran models on **RCAC GPU** clusters, refining multi-step forecasting accuracy via hyperparameter tuning.
- Implemented time series forecast on Lorenz systems with **PyTorch-based LSTM** and **Transformer** models.

TECHNICAL SKILLS

Languages: Python, JavaScript, Java, C/C++, TypeScript, SQL, Dart, R, HTML/CSS

Frameworks: React.js, Angular.js, Flutter, Next.js, Express.js, MongoDB, MySQL, Hadoop

Developer Tools: Node.js, Kubernetes, Docker, Terraform, AWS, Azure, Linux, Unix

Libraries: NumPy, PyTorch, OpenCV, Pandas, Puppeteer.js, Selenium