

FNU PRAKUL

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TECHNICAL SKILLS

Project & Delivery: Agile (Scrum), SDLC, Sprint Planning, Stakeholder Collaboration, CI/CD, Roadmapping.

AI/ML Tooling: LLM Pipelines, NLP, Model Inferencing, PyTorch, TensorFlow,, Experimentation Frameworks, DevOps, HDFS.

Cloud & Infrastructure: IAC, AWS (EKS, Lambda, CloudWatch, S3, CDK), Kubernetes, Helm, Docker, CloudFormation, Velero.

Languages & Frameworks: Python, Go, Java, React, Flask, Spring, SQL, Postgres, MongoDB, DataDog, Prometheus, Bash.

Certifications: Google Project Management, IBM Microservices & Serverless, ITIL.

EDUCATION

Master of Business Administration, Information Technology | *Humphreys University*

Mar 2025 – present

Master of science in Engineering Science, Data Science | *State University of New York at Buffalo – 3.78 GPA*

Aug 2020 – Feb 2022

B. Tech in Electronics & Communication | *Guru Gobind Singh Indraprastha University – 3.68 GPA*

Aug 2013 – Jul 2017

PROFESSIONAL EXPERIENCE

- **Amazon.com:** Software Development Engineer, Alexa AI Jun 2022 – Feb 2024
 - Designed and implemented OEMS, an orchestration service using **Golang** and **Kubernetes**, to automate manual deployments for **Alexa A/B experiments**, increasing experiment capacity from **2-4** to **15**. The system streamlined the deployment of model configurations and experiment configurations, enabling seamless transitions between production and experimentation. Additionally, it **automated dial-ups, model allowlist/blocklist updates**, and **cleanup** processes, reducing manual intervention. To enhance usability, I developed a **React**-based frontend that interfaced with the **Kubernetes** backend, allowing the science team to focus on experiment values rather than deployment mechanics.
 - Developed and deployed **Golang** microservice **webhooks** to validate incoming requests, reducing service request failures by **30%**. Leveraged **Helm Charts**, **Cert Manager**, and **AWS EKS** to ensure scalable and secure deployments. Additionally, architected an automated **AWS EKS cluster** backup service and a comprehensive **disaster recovery (DR) plan**, using **Velero**, **S3**, **CloudFormation**, and **TypeScript CDK**, which eliminated unrecoverable infrastructure fault risks and ensured **100%** fault-free EKS upgrades.
 - Designed and implemented **ETL** architecture for ingesting data into a **big data** pipeline, leveraging **AWS Glue**, **Lambda**, **DynamoDB**, **S3**, and **Redshift** to generate training data for new **LLM** models. Improved service reliability and code health by increasing Golang **coverage** by **9%** (including **unit, integration, load, and chaos tests**) and introducing operational **canaries** using **EC2**, **S3**, and **CloudWatch**. Ensured engineering excellence through **Git**-based **CI/CD** pipelines, enhancing deployment efficiency and system robustness.
- **NTT DATA Services:** Software Developer, JLL project Aug 2017 – Mar 2019
 - Developed a **Python Flask** and **SQL**-based web app exposing APIs for business report generation, improving reporting efficiency. Monitored **55+** applications' **health checks** across the Asia region, covering **data warehousing, incident management, and change management**, utilizing **ITIL** best practices (ITIL & **C#.NET** certified). Additionally, implemented a spam detection system using **Logistic Regression**, achieving **97.3%** accuracy by leveraging ridge regression and NLP techniques such as **tokenization, stemming**, and **stopword** removal, significantly enhancing email security and data quality.
 - Optimized client report runtime from **1 hour** to **under 2 minutes** by developing efficient **Bash scripts**, improving report generation speed by **98%**. Additionally, implemented client-side **hashing** for an internal job portal using **JavaScript**, enhancing data security and performance across company-wide usage.

INTERNSHIP AND FREELANCE WORK

- **EITACIES INC Software Services:** Data Science Intern, Marketplace team Sep 2021 – Jan 2022
 - Built an emotion detection system from voice data using **ResNet34** (**93%** accuracy) and a real-time **transcriber** with **Mozilla DeepSpeech**; collaborated in an **Agile** team to deliver stakeholder-aligned features and drive voice analytics capabilities for product teams.
- **MyProductionWork:** Freelance Software Developer, Tooling team Apr 2024 – Sep 2024
 - Delivered **React** tooling to digitize film workflows and automate S3 file management, reducing manual effort by 80% with **OpenCV** **QR**-based automation and a scalable **Java/Kubernetes** backend.