

# PRAKUL

+1(716) 507-6412 | [prakul.us.95@gmail.com](mailto:prakul.us.95@gmail.com) | [linkedin.com/in/prakul-95](https://www.linkedin.com/in/prakul-95) | [prakul.work](https://prakul.work)

## PROFESSIONAL EXPERIENCE

---

**Amazon.com:** Software Development Engineer, Alexa AI

Jun 2022 – Feb 2024

- Designed **Java** service for customer route optimization based on past interactions, which reduced error rates by **~1 million/week**. **Coordinated cross-teams** to deliver tier-1 feature migration.
- Developed and integrated a new orchestration service that automates machine learning model deployment cycles (such as A/B experiments) that had taken 15+ man-hours each. Used **React.js**, **Golang REST API**, **Docker**, **Kubernetes**, and **AWS EKS**.
- Built **Golang** microservice to validate incoming requests, reducing service request failure by 30%. Used **Helm Charts**, **Cert Manager**, and **AWS EKS**.
- Achieved fault-free **AWS EKS** upgrades for Alexa by creating an automated cluster backup service and a comprehensive **disaster recovery** (DR) plan that eliminated unrecoverable infrastructure fault risks. Used **Velero**, **S3**, **CloudFormation**, and **TypeScript CDK**.
- Spearheaded **CDK v2** upgrade for Alexa stack with **zero downtime**.
- Built **ETL** pipelines using **AWS Lambda** functions to self-manage and monitor the ingestion of training data for new LLM models. Used **TypeScript** and **Python**.
- Enforced service reliability and code health through engineering excellence. Increased test coverage by **9%** (including unit, integration, load, and chaos tests) and introduced operational canaries through **EC2**, **S3**, and **CloudWatch**. Used **Git** and **CI/CD** pipelines.

**NTT DATA Services:** Software Developer, JLL project

Aug 2017 – Mar 2019

- Implemented a spam detection system using Logistic Regression to enhance email security. Achieved 97.3% accuracy by applying ridge regression, and improved data quality through NLP processes like tokenization, stemming, and stopword removal.
- Developed a web app using **Python Flask** and **SQL**, exposing APIs for generating business reports.
- Monitored 55+ applications' health checks for the Asia region, including **data warehousing**, **incident management**, and **change management** through **ITIL**. Certified in **ITIL** and **C#.net** development.
- Optimized client report runtime from 1hr to under 2 mins by creating efficient **bash** scripts.
- Developed client-side hashing for an internal job portal using **JavaScript** which was used company-wide.

## EDUCATION

---

**MS 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

## INTERNSHIP AND FREELANCE WORK

---

**EITACIES INC Software Services:** Data Science Intern, Marketplace team

Sep 2021 – Jan 2022

- Implemented Emotion Detection from Voice Audio Files using transfer learning from the ResNet34 architecture with 93% accuracy. Developed a voice transcriber using Mozilla DeepSpeech for streaming transcription. Collaborated on an Agile (Scrum) team to deliver regular updates to business stakeholders and project managers.

**MyProductionWork:** Freelance Software Developer, Tooling team

Apr 2024 – Sep 2024

- Developed a **React**-based web application to digitize film slate, featuring note-taking and automated file renaming using **OpenCV** QR models in **Python**. This reduced manual effort, maintained structured file organization, and lowered costs by automating tasks traditionally handled by multiple assistants.
- Developed a React-based web application to streamline access to Amazon S3 for viewing, uploading, downloading, and archiving files by integrating a **Spring Gradle**-powered Java REST API backend service hosted on a **Kubernetes** cluster. Achieved seamless file management by implementing functionality for listing file types, retrieving folder contents, and generating pre-signed URLs for secure uploads.

## TECHNICAL SKILLS

---

**Languages and Databases:** Python, Java, C#, Go, HTML, Bootstrap, MySQL, MongoDB, PostgreSQL, JavaScript, Ruby, R programming.

**Frameworks and Tools:** Kubernetes, Docker, Helm, CDK, Git, CI/CD Pipelines, React, Python, Flask, Django, REST APIs, Kafka, Apache Spark, ETL pipelines, SQL, NoSQL, Spring, IaC, AWS (EC2, S3, EKS, Lambda, CloudWatch, CDK), CloudFormation, DataDog, Prometheus, Postman, NLP, Machine Learning, Model inferencing, TensorFlow, PyTorch, SDLC, Scrum, Agile, ITIL, Test Driven Development, Bash, Hadoop, HDFS, DevOps.