# ASMITA HANCHATE

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## WORK EXPERIENCE

**Amazon Web Services (AWS)** *Jul 2024 - Present*
*Software Development Engineer* *Seattle, WA*

- Designed and implemented **REST APIs (Java, Spring Boot)** that automated incident response workflows and reduced ticket resolution times for ELB service across 40 AWS regions from **15 minutes to 1 minute**, improving uptime and customer experience.
- Implemented asynchronous, **multithreaded** recovery workflows for **Network Load Balancers** using **thread pools** and event-driven state updates, cutting time-to-recovery for accidentally deleted ELBs from ∼5 hours to ∼4 minutes.
- Architected changes across ELBV2 APIs and shipped via **CI/CD pipelines**; Instrumented fault and latency metrics for **datastore event-lifecycle** and queue-health telemetry by developing **Cloudwatch** alarm and **ticketing** strategy on relevant metrics.
- Built multiple **microservice**s including cleanup services for **GDPR compliances** and **EC2/SQS based target state tracking** service for two new AWS regions ensuring downstream integrations, and cross-service functionality.
- Led **zero-downtime datastore migrations** from donor DB for high availability, cross-region replication, and data-consistency.
- Reworked **CreateLoadBalancer** idempotency to enable automatic restoration via resource validations, and moved lookups to a downstream service for faster, **efficient retrieval**, cutting **p99 control-plane latency** from **∼30s to ∼2s (≥93% reduction)**.
- Implemented correct cleanup for **ALB mTLS** during **HTTPS → HTTP** transitions -disassociating **trust stores (CA certificates** and listener attributes; purged orphaned records, eliminated 100% of related customer faults, and cut datastore/storage cost.

**Amazon Web Services (AWS)** *Sept 2022 - Dec 2022*
*Software Development Engineer Intern* *Remote, Herndon, VA*

- Collaborated with the security team to develop a full-stack web-app to streamline the management of AWS customer accounts across specific regions using ReactJS for the user interface and integrated it with **Amazon DynamoDB, API Gateway, AWS Lambda.**
- Conducted **threat modeling** to identify potential vulnerabilities and enhance website security measures, proactively mitigating potential threats and ensuring a robust security posture based on latest NIST guidelines

**Student Affairs IT, Virginia Tech** *Jan 2024 - Jul 2024*
*Applications Developer* *Blacksburg, VA*

- Developed a **PHP** application to streamline purchase approvals for Univeristy resources by consolidating two existing applications
- Utilized **Vue.js** and **Codeigniter 4** to create a customizable process for each department, facilitating efficient purchase approvals

**DVE Lab, Virginia Tech | *Prof.Denis Gracanin*** *May 2023 - Feb 2024*
*Software Development Research Assistant : Receptivity Project* *Blacksburg, VA*

- Built a real-time student-receptivity web app **(React, MQTT)** used by professors at four universities for a research study; delivered live feedback dashboards to recalibrate pace/content with metrics for teaching adjustments raising formative quiz scores by **40%.**

## PROJECTS

**HokieCFA - An app for in-person Career Fairs at Virginia Tech** *Jan 2023 - May 2023*

- Led a team to develop a Career Fair app to aid in in-person career fairs using **React Native, MongoDB, & Flask**
- Implemented a scheduling algorithm for conflict management on registering in multiple queues at once

**Analysis on Amazon Product Reviews** *Jan 2023 - May 2023*

- Utilized python to perform **link prediction** through **sentiment analysis** and **topic modeling** on Amazon product reviews
- Employed **Latent Dirichlet Allocation (LDA)** model for topic modeling to examine topic trends across the text corpus and evaluate the sentiment of individual topics and the entire dataset
- Analyzed the effect of the increase in the number of topics to improve granularity and to yield coherent results

**US Road Accident Fatality Analysis (2016 - 2021)** *Mar 2022 - May 2022*

- Lead a team to develop an **Interactive Dashboard** using d3.js, HTML, & JavaScript for analyzing US traffic fatalities encompassing national, state, and county levels, and featuring detailed driver profiles involved in fatal accidents to promote awareness and caution
- Utilized **Tableau Prep** to perform **data wrangling** & **preprocessing** to aid with visualization and displayed it using creative visualizations such as **Sankey Graphs**

## EDUCATION

**Virginia Tech** *Aug 2021 - May 2023*
*Master of Engineering in Computer Science* | *GPA* - **3.77/4.0** *Blacksburg, VA*

**Relevant Coursework:** Data Structures & Algorithms; Databases; Machine Learning & Big Data; Information Visualization.

## TECHNICAL SKILLS

**Programming Languages:** Python, Java, Ruby, JavaScript,TypeScript, SQL, MongoDB
**Development Frameworks:** ReactJS, Vue.js, SpringBoot, Flask, Bootstrap, Tableau, Amazon Web Services, REST APIs
**Tools:** Figma, Linux, GIT, Docker, Kubernetes, Google Colab, Tableau, Confluence, Jira, Bash, Agile SDLC, NoSQL Databases