

# Kshitij Narvekar

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## Education

### Virginia Tech

May 2025

*Masters in Computer Science*

- **Relevant Coursework:** Machine Learning, Deep Learning, Urban Computing, Usability Engineering

### Pune University

May 2020

*Bachelors of Engineering in Information Technology*

- **Relevant Coursework:** Data Structures and Algorithms, OOPS, Operating Systems, Computer Networks

## Technical Skills

**Languages:** Python, JavaScript, php, C, C++, HTML, CSS, Java

**Technologies:** React.js, Angular, Vue.js, NextJS, Django, Flask, Express.js, TensorFlow, PyTorch, jQuery, Bootstrap, Laravel, Node.js, Mongo DB, AWS (Glue, Beanstalk, Lambda, StepFunctions, RDS), Openstack, Linux, CI/CD, Docker, YAML, Kubernetes, Quicksight, MySQL, NoSQL, Web Application, Web Development, Version Control, Networking, PySpark

**AWS Certifications:** Cloud Practitioner, Developer Associate, Solutions Architect Associate

## Experience

### Commonwealth Cyber Initiative

Apr 2024 – Present

*Research Intern*

- Developed and implemented a CI/CD pipeline using GitLab, reducing testbed architecture modification time by 40% while simplifying backend architecture changes
- Optimized resource allocation for OpenStack, ensuring efficient utilization and preventing up to 15% of potential idle resource wastage. Leveraged Kubernetes and Docker to streamline environments, enhancing reproducibility and scalability across different use cases.
- Integrated and optimized GPU resources within the OpenStack environment, enabling support for GPU-accelerated workloads, configuring passthrough for enhanced compute performance, and automating GPU orchestration using Kubernetes and Docker.

### Blazeclan Technologies

Nov 2020 – Aug 2023

*Cloud Engineer*

- Spearheaded full-stack development using Vue.js and Node.js, delivering scalable REST APIs, and optimizing SQL queries to accommodate exponential data growth handling, Managed and supported a user base exceeding 100,000 individuals.
- Streamlined and upgraded backend infrastructure on AWS, implementing automated backup and disaster recovery solutions, reducing debugging and recovery time by 30%.
- Successfully reduced client costs by 50% by introducing serverless technologies and optimizing the entire architecture for multiple client websites.
- Designed and built interactive BI dashboards using AWS Quicksight, Athena, and MySQL queries, delivering actionable insights that improved decision-making processes for 15+ product managers and stakeholders.
- Established an ETL pipeline with AWS Glue, processing 50,000 records per day, facilitating access to vital statistics for multiple office locations.

### Compuage Infocom Ltd

May 2016 – Jul 2016

*Software Engineer Intern*

- Played a pivotal role in developing a web-based application focused on enhancing product shipment tracking efficiency, consolidating multiple third-party APIs onto a unified platform.
- Facilitated the adoption of agile methodologies within the team, utilizing Jira and Confluence to manage tasks and workflows, resulting in a 20% increase in project delivery speed.

## Projects & Publications

### Natural Language to SQL Query conversion using Deep Learning | Django, Tensorflow, Python, MySQL

- Developed a deep learning-based system to convert natural language questions into SQL queries, achieving 85% accuracy and reducing misclassification by 30% through convolutional neural networks for query type classification.
- Enhanced SQL query generation precision by 40% using sequence-to-sequence models with LSTMs, significantly improving the system's performance over baseline models.
- Publication - [IERJ Publication](#)

### MARU Bot | Flask, LLM, Google Gemini, Node.js

- Led the development of an intelligent chatbot using Google's Gemini model and Retrieval-Augmented Generation (RAG), achieving a 90% accuracy rate in generating personalized and context-aware responses for over 1,000 active users across Discord and a Chrome extension.
- Implemented advanced NLP techniques and custom scheduling mechanisms, improving information retrieval efficiency by 35% from chat history and web sources while ensuring user privacy and security compliance.