



Nilay Patel

(770) 820-6979 | ✉ pnilaynisheethkumar@gmail.com |  LinkedIn |  GitHub

Technical Skills

- **Programming:** Python, Java, Bash, SQL, JavaScript, HTML, CSS
- **Web Development:** React, Node.js, Flask
- **Cloud & DevOps:** **AWS** (EC2, S3, IAM, Lambda, CloudFormation), **Terraform**, **Kubernetes**, Docker, CI/CD (Jenkins, GitHub Actions, ArgoCD)
- **Infrastructure & Automation:** Linux, **Ansible**, Helm, Serverless Computing
- **Monitoring & Security:** Prometheus, Grafana, AWS CloudWatch, Security Groups
- **Databases:** PostgreSQL, MySQL, DynamoDB

Work Experience

Software Engineer - Graduate Research and Teaching Assistant **Aug 2023 - Present**

Georgia State University

- Developed and maintained **scalable cloud-native applications** on **AWS** using **Terraform** and **Kubernetes**.
- Designed and implemented **CI/CD pipelines**, reducing deployment time by **50%** and increasing system reliability.
- Automated infrastructure provisioning, optimizing resource utilization and cutting cloud costs by **30%**.
- Conducted performance monitoring and troubleshooting using **Prometheus** and **AWS CloudWatch**, enhancing system uptime.
- Assisted students in **Java programming, software development, and cloud computing concepts**.
- Guided students on **DevOps best practices, CI/CD pipelines, and cloud deployment**, improving their hands-on experience.

Software Engineer Intern

May 2024 - Aug 2024

Nutracap USA

- Developed **serverless applications on AWS**, improving system scalability and reducing response time.
- Designed and optimized **data pipelines for analytics**, integrating **SQL databases** with **Power BI**.
- Automated cloud resource allocation, reducing infrastructure costs by **25%**.
- Enhanced real-time monitoring using **AWS Lambda**, **CloudWatch**, and automated alerts.

Education

Georgia State University

Master of Science in Computer Science | **GPA: 4.0/4.0**

Gujarat Technological University

Bachelor of Science in Computer Science | **GPA: 9.8/10**

Atlanta, GA

Aug 2023 - Present

India

Aug 2019 - May 2023

Projects

Spam SMS Classification (NLP & ML)

- Developed a **spam detection model** using **Natural Language Processing (NLP)** & **Machine Learning**.
- Preprocessed text data using **TF-IDF vectorization** and **NLTK**, optimizing feature extraction.
- Achieved **94% accuracy** in spam classification using **Random Forest** and fine-tuned hyperparameters.
- Deployed the model using **Flask API**, allowing real-time spam detection for SMS filtering applications.

Stock Price Prediction with AI

- Built **time-series forecasting models (LSTM, ARIMA, SARIMA)** to predict stock trends.
- Performed **feature engineering and time-series analysis** to enhance model accuracy.
- Integrated **real-time stock data** from APIs and optimized prediction intervals.
- Achieved **high-accuracy predictions** using advanced ML techniques and hyperparameter tuning.

COVID-19 Transit Simulation (Agent-Based Model)

- Built an **agent-based simulation** to model virus transmission in **public transit systems**.
- Simulated **real-world seating arrangements** and **infection probability** using **Python** and **NetLogo**.
- Visualized simulation results with **Matplotlib** and **Seaborn** to analyze transmission trends.
- Designed an **interactive dashboard** for scenario-based modeling and risk assessment.