

Neel Shah

Senior Software Engineer

San Francisco, CA, United States | [LinkedIn](#) | [GitHub](#)

Full-stack engineer building scalable cloud infrastructure and AI systems. Experienced with Kubernetes, AWS, and modern Python frameworks.

EXPERIENCE

Software Engineer - Delivery Oct 2023 — Jan 2026
Calfus Inc. *San Francisco Bay Area*

Deployed and managed production Kubernetes infrastructure for SupplyWhy.ai, a multi-agent supply chain resilience system. Led SOC 2 compliance initiative, reducing critical vulnerabilities by 65%. Automated CI/CD pipelines and tenant onboarding, cutting release errors by 40% while scaling to 40+ enterprise clients. Designed complex job workflows with Kubernetes, AWS Batch, and Step Functions.

Cloud Engineer Jan 2023 — May 2023
BNY Financials *New York, United States*

- Developed software applications on micro-services architecture using Docker containers, Docker Compose, and Kubernetes.
- Optimized MongoDB performance by creating various indexes on different collections.
- Created EC2 instances and implemented large multi node Hadoop clusters in AWS cloud from scratch using automated scripts such as terraform.
- Performed Data framing, Data Analysis, and Data representation using Python Pandas.
- Develop consumer-based features and applications using Python, Django, HTML and Test-Driven Development (TDD).
- Developed server-based web traffic statistical analysis tool using Flask, Pandas.

Software Development Intern May 2022 — Jul 2022
Raymond James Financial *St Petersburg, Florida, United States*

Designed and implemented data extract reports for the Tax Credit Funds application, enabling 130 active users to manage tax, property, and funds information. Optimized the Jenkins CI/CD pipeline, achieving a 40% improvement in build automation efficiency.

CS Teaching Assistant Sep 2021 — May 2023
New York University *New York City, New York*

Mentored 200+ students across Data Engineering, Processing Big Data for Analytics, and Programming tools courses. Graded assignments, quizzes, and tests while providing detailed feedback. Achieved an average success rate of 80% across all quizzes and tests.

Software/Cloud Developer Oct 2020 — Jul 2021
EY Technology Solutions *Mumbai, Maharashtra, India*

Built an integrated application using machine learning to automatically detect and extract text and tabular data from business invoices and bills for the SAP department, reducing manual data entry by 80%. Developed a ReactJS interface to enable users to edit detected content and manage tables, improving processing speed by 60%.

Software Engineer Jun 2019 — Jul 2020
DIBC *Mumbai, Maharashtra, India*

EDUCATION

New York University Sep 2021 — Jun 2023
Master's degree in Computer Science
GPA: 3.89/4.00

KJ Somaiya College of Engineering, Vidyavihar Aug 2016 — Sep 2020
B.Tech in Information Technology
GPA: 3.45/4.00

PROJECTS

Magikube

Magikube, an open-source tool designed to simplify the lives of developers by automating infrastructure setup and application deployment. With a single command, Magikube orchestrates production-grade environments with precision, eliminating the need for manual configurations.

Aimed at streamlining development, Magikube provides fine-grained control while addressing common hurdles like tech debt and complex debugging. It's a modern solution for coders looking to balance speed and quality without sacrificing sanity.

Perfect for teams and individuals alike, Magikube is the ultimate tool to focus on what truly matters: writing great code and seeing projects come to life with ease.

ProColab

A collaboration platform for students of various universities to work on projects together. The platform will leverage their skills and abilities to help them find suitable partners to help them on their projects.

Traffic Violations Multiclass Classification

- Identified feature importance using techniques such as variable importance, lasso regression, and information gain on the Traffic Violations dataset with over 1 Million rows, and 40 attributes with highly cardinal data.
- Executing algorithms such as SVM and kNN in parallel on a high-performance cluster leveraging 64/200 cores and working with bigmemory, biganalytics, biglm packages in R.
- Attaining better accuracy over 93% using Ensemble methods such as cross-validation, boosting and, stacking.

Plant Pathology Disease Classification

- Executed multi-label classification on leaves with apple diseases on 18.6K Foliar images.
- Incorporated image hashing and image augmentation techniques to clean data, performed data augmentation and sampling to handle imbalanced dataset classes.
- Achieved 82% accuracy over validation and test sets. Implemented Efficientnet-B4 for better accuracy.

Customer Churn Prediction for Banks

- Developed a web application to predict customer churn for banks by training Neural networks on 10K rows.
- Employed ensemble machine learning algorithm (AdaBoost) and neural network and stacked algorithms to get an accuracy of 79%.
- Created a functionality for banks to upload their custom dataset to perform predictions and get the top 5 reasons bank's customer may leave.

Help Foundation to Prevent Suicides

We created this project during NMIMS Hackathon. We developed User-friendly and easy to understand UI for users.

Main Features of our Web Application:

- 1) Donation through PayPal for donors to donate to the organization created using PayPal API.
- 2) Asks for User location to show user nearby centers and to send immediate help to the user in a problem.
- 3) Live Chat, Instant call, and video call feature to the user to solve user problems and with the use of video call feature users can feel and understand better so that user can prevent any gruesome act.
- 4) Volunteer registration form for the people who want to join the organization.
- 5) Inspirational Video, Articles, Survivor Stories and quotes for Users to understand how had suicide is and how to overcome it.

Centralised Government Schemes Portal

A Website Portal for the government schemes provided by the Central Government as well as the State Government. The system provides a centralized platform for probing all the schemes provided by the Central and State Government. Schemes related to Education and Learning, Health and Wellness, Electricity, Water and Local services, Money and Taxes, Jobs, Justice, Law and Grievances, Travel and Tourism, Business and Self-employed, Births, Deaths, Marriages and Childcare, Pension and Benefits, Transport and Infrastructure, Citizenship, Visas and Passports, Agriculture, Rural and Environment, Science, IT and Communications.

Features:

- 1)The website provides digital locker wherein users can store their confidential documents securely.
- 2)Grievances forum wherein users can communicate and help other users to solve their issues.
- 3)Search and view various government schemes and also read the details about the schemes.
- 4)Login and Signup page for users, also the user credentials are encrypted for data security.

CERTIFICATIONS

EY Analytics - Data Science - Learning, EY	Jan 2021
Front-End Web UI Frameworks and Tools: Bootstrap 4, Coursera	Jul 2020
Neural Networks and Deep Learning, Coursera	Apr 2020
Software Security, Coursera	Apr 2020
Machine Learning, Coursera	Nov 2018
Top 10 TSEC Hackathon, TSEC Codestorm	Sep 2018
IBM Machine Learning Essentials - 2017, IBM	Aug 2018
C Programming, NIIT Technologies Limited	Apr 2016
AWS Certified Solutions Architect – Professional, Amazon Web Services (AWS)	
AWS Certified SysOps Administrator – Associate, Amazon Web Services (AWS)	

SKILLS

Python (Programming Language) · Software Design · Production Deployment · Docker Products · Data Analysis · Test-Driven Development · Microservices · Big Data Analytics · Software Development Life Cycle (SDLC) · CUDA · Go (Programming Language) · Continuous Integration and Continuous Delivery (CI/CD) · DevOps · AngularJS · C++ · Python · Microsoft Office · Web Development · Machine Learning · Algorithms · Artificial Intelligence (AI) · Data Science · Deep Learning · Programming · Android Development · Web Applications · Android · C · Cascading Style Sheets (CSS) · PHP · MySQL · jQuery · Java · JavaScript · Unity3D · SQL · HTML · Linux · TensorFlow · React.js · Node.js · Bootstrap · Flutter · MongoDB · GitHub · Problem Solving · Critical Thinking · Data Analytics · Full-Stack Development · Hadoop · TypeScript · HTML/CSS · REST APIs · Git · FastAPI · LangChain · LangGraph · PyTorch · Numpy · Pandas · PostgreSQL · Vector Databases · Amazon RDS · Amazon DynamoDB · Kubernetes · Ansible · Terraform · Helm · Jenkins · GitHub Actions · Azure · GCP