Smit Mahesh Panchal

smitpanchal1661@gmail.com | +1 (480) 853-9400 | [LinkedIn](#) | [Github](#) | Tempe, AZ

EDUCATION

M.S. in Software Engineering *(Expected May 2026)*   **Arizona State University**, *Arizona, USA*
Current GPA – 3.78 / 4.00
B.E. in Computer Engineering, AI & ML Honors   **University Of Mumbai**, *Maharashtra, India*
Overall GPA – 3.58 / 4.00

EXPERIENCE

NLP & Machine Learning Intern, *Blue Clay Health - USA*   ***Aug 2025 - Sep 2025***
- Built AI-driven clinical documentation features using NLP for entity extraction, de-identification, and summarization.
- Designed RAG workflows with vector databases to boost query accuracy.
- Streamlined MLOps with experiment tracking, version control, and CI/CD, deploying on Vercel.
- Partnered with full-stack engineers to integrate ML services into production.

PROJECTS

Web-Based Software Metrics Calculator (SER 516) | *Java, Spring Boot, Docker, Vue.js, MongoDB, GitHub Actions*
- Built a full-stack web app for software metrics (coupling, defect density, instability) with Spring Boot microservices, REST APIs, and Docker.
- Designed scalable backend architecture with concurrency, service interfaces, GitHub integration, and Adapter design pattern.
- Developed a Vue.js frontend with real-time visualizations and trend tracking, improving usability and maintainability.
- Implemented CI/CD pipelines with GitHub Actions; collaborated in a 24-member Agile team to scale to 16 services and deliver 118 story points.

Carpool: Ride-Sharing Web Platform | *Bootstrap, Javascript, Python, Django, SQL*
- Constructed a responsive carpooling website using HTML, CSS, JavaScript, and Bootstrap for a user-friendly frontend, while employing Python and Django for backend functionality to increase ride-sharing efficiency.
- Implemented a SQL database for secure user account management and effective handling of travel data.
- Created functionality for users to track posted and accepted carpool requests. Iteratively gathered feedback from 30+ users over 3 testing cycles, improving functionality efficiency and boosting user experience.

Recyclemate: AI-Powered Waste Classification | *CNN, Python, Django, SQLite*
- Engineered a CNN-based AI model with 85% accuracy to classify recyclable and non-recyclable waste.
- Integrated the model into a Django-based web application, enabling real-time predictions through an intuitive user interface.
- Leveraged TensorFlow, OpenCV, and Keras for efficient image processing and accurate waste classification.
- Published research in IEEE (August 2023), showcasing an AI-powered approach to sustainable waste management.
- Utilized SQLite for efficient data storage and Django's template rendering system to dynamically display classification results.

NLP-Powered Short Video Enrichment System | *React, Flask, Firebase, NLP*
- Engineered an NLP-based recommendation system that delivered personalized short video suggestions using CountVectorizer and Cosine Similarity.
- Processed and analyzed 2,000+ videos, improving recommendation relevance by leveraging hashtags, descriptions, and user interactions.
- Built a Flask backend with Firebase Firestore, ensuring efficient data storage and real-time retrieval for seamless user experience.
- Published a research paper in IEEE (Feb 2024) showcasing the system's effectiveness in enhancing video engagement through NLP-driven recommendations.

TECHNICAL SKILLS

Programming & Scripting: Python, Java, JavaScript, Scala, TypeScript, C/C++, SQL, OpenSSL, Ajax
Frameworks & Technologies: Spring Boot, Django, React, Vue.js Node.js, Express.js, Snyk, SonarQube, Cppcheck
Databases & Cloud: MySQL, PostgreSQL, SQLite, MongoDB, Firebase, AWS (S3, Lambda, EC2, EKS), Spark
Tools & Development: Git, Docker, Kubernetes, GitHub Actions, Gradle, Maven, CI/CD, Agile/Scrum, A/B Testing, Valgrind

EXTRACURRICULAR EXPERIENCE

Smart India Hackathon 2023 Software Edition Winner (PS - SIH1453), *Delhi - India*   ***Dec 2023***
- Conducted security analysis on OpenVPN's crypto library and its integration with OpenSSL, using Snyk, Cppcheck, SonarQube, Valgrind, and AddressSanitizer to identify vulnerabilities.
- Discovered 60+ memory leaks and API misuse in OpenSSL interactions, impacting security and stability.
- Worked in a team of 5 to analyze issues and present findings to company directors, demonstrating teamwork, problem-solving, and technical communication skills.