

SPANDAN MAHESH PATIL

Los Angeles, CA | (213) 691-6554 | Email - patil.spandanm@gmail.com | LinkedIn - <https://www.linkedin.com/in/spandanpatil> | Portfolio - <https://patilspandanm.netlify.app> | GitHub - <https://github.com/Spandan8> |

EDUCATION

University of Southern California

Los Angeles, CA

Master's of Science | Major - Computer Science

August 2024-May 2026

- GPA : 3.82 / 4.0
- Coursework: Analysis of Algorithms, Database Management Systems, Machine Learning, Natural Language Processing

Vidyalankar Institute of Technology

Mumbai, India

Bachelor of Engineering | Major - Information Technology

August 2018-May 2022

- CGPA : 9.78/10 with Distinction
- Relevant Coursework: Advance Data Structures and Algorithms, Advance Data Management, Big Data Analytics

PROJECTS

Diabetic Retinopathy (DR) Stages Detection (Python, PyTorch)

February 2025-August 2025

- Devised a deep learning pipeline detecting diabetic retinopathy from retinal fundus images, achieving 82% accuracy using CNNs with transfer learning (ResNet, DenseNet, EfficientNet). Pipeline included CLAHE and Enlighten GAN-based preprocessing, data augmentation, and multi-class DR severity classification on a dataset of 10K images

Multi-Class Waste Image Classification Using Transfer Learning (Python, Pytorch)

April 2025

- Built a classifier for nine waste categories using pre-trained CNNs (ResNet, EfficientNet, VGG16) with data augmentation, frozen feature layers, and fine-tuned final layers, achieving robust multi-metric evaluation (F1, precision, recall, AUC)

FLIP (AI-Powered E-Book Analysis and Assessment Tool) (ReactJS, Node.js, Python, MongoDB, Transformer) July 2021-April 2022

- Architected a web-based interactive reading platform using ReactJS, Node.js, Python, and MongoDB Atlas, enabling e-book uploads with AI-generated page summaries and assessments. Implemented NLP Transformers for summarization and question generation, with REST APIs powering seamless frontend-backend interaction

EXPERIENCE

Tata Consultancy Services

Mumbai, India

Systems Engineer - Financial Services

July 2022-July 2024

- Spearheaded banking platform migration to micro-services with REST APIs and constructed a blueprint separating core functions from client-specific requirements, boosting scalability 40%, and minimizing customization efforts up to 25%
- Collaborated with cross-functional teams for product integration and proactively structured onboarding training for new team members, reducing integration issues 10%, and enhancing overall team efficiency 30%.

Tata Consultancy Services

Mumbai, India

Software Engineer Intern - Financial Services

March 2022-June 2022

- Prototyped a Node.js-based Payment Gateway integrating PSD2 open-banking APIs from ING and Deutsche Bank, resulting in a 15% increase in client acquisition success rate

Gaia Smart Cities

Mumbai, India

Software Engineer Intern

April 2020-July 2020 & December 2019-January 2020

- Engineered on a speech recognition neural network, improving accent accuracy 15% and reducing word error rate 5.8% for offline smart device control, also developed a cross-platform BLE-based system monitoring 20+ cold storages, elevating tracking efficiency 35% and cutting spoilage rate by 25%.

PUBLICATIONS

- Authored and published the paper "State-of-the-Art Approach to e-Learning with Cutting Edge NLP Transformers: Implementing Text Summarization, Question and Distractor Generation, Question Answering" in International Journal of Advanced Computer Science and Applications (IJACSA), Volume 13 Issue 1, 2022, ISSN: 2156-5570

SKILLS & CERTIFICATIONS

- Technologies: ReactJS, NodeJS, NLP, AI/ML, Data Analytics, Android & IOS, DBMS, Git, Jenkins, Docker, Kubernetes
- Programming Languages: Python, JavaScript, Swift, Java, PHP, HTML, CSS, and C++
- Soft Skills: Teamwork, Leadership, Problem-Solving, Time Management, Conflict Resolution, Adaptability, Customer Service
- CS50 – Introduction to Artificial Intelligence with Python & PH125.8x – Data Science: Machine Learning from Harvard by edX
- DL0120EN – Deep Learning with TensorFlow from IBM & CS198.2x – Blockchain Technology from BerkeleyX by edX