

Soham Himanshubhai Padia

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Summary — Master's student in Artificial Intelligence at Northeastern University with experience in machine learning, deep learning, and full-stack development. Driven by a passion for building impactful solutions that enhance everyday life and by a commitment to sharing knowledge through open-source and research contributions.

Education

Northeastern University | Boston, MA

Master of Science in Artificial Intelligence

Minors: Machine Learning

2025-2027

Grades yet to be recieved

Dwarkadas J. Sanghvi College of Engineering | Mumbai, India

Bachelors of Technology in Information Technology

Minors: Developer Operations

2021-2025

CGPA = 3.43/4

Publications

NLP Techniques in Chi-Square Tests and Feature Selection

September 2023 – May 2024

Research Project under Dr. Abhijit R. Joshi | Paper Link

Mumbai, India

- Engaged in an in-depth research project utilizing Natural Language Processing (NLP) techniques to enhance the efficiency of Chi-Square tests and refine the process of feature selection in advanced machine learning models.
- Deepened my analytical and computational capabilities by innovatively fusing Natural Language Processing (NLP) techniques with comprehensive statistical analyses, aiming for superior data interpretation and optimization.

Enhancing Public Speaking Skills Through AI-Powered Analysis And Feedback

August 2023 – June 2024

Research Project under Prof. (Mrs.) Sweedle Adley Machado | Paper Link

Mumbai, India

- Lead this project centered on leveraging state of the art Natural Language Processing, Computer Vision and Deep Learning technologies to give personalised improvements that cater to the needs of individuals.
- The project's core functionality focuses on real-time evaluation of verbal cues, body language, and audience engagement, providing instant feedback and actionable insights to enhance speaker performance and audience connection.

Detailed Comparisons of different Reinforcement Learning models on Blockchain security

October 2024 – Current

Research Project under Dr. Ramchandra Mangrulkar

Mumbai, India

- Implementing this project aimed at enhancing blockchain scalability and security by integrating Fully Homomorphic Encryption (FHE) and different Reinforcement Learning models, ensuring resilience threats.
- Developing an adaptive encryption module capable of performing secure computations on encrypted data, dynamically switching between partial and full homomorphic encryption based on computational efficiency.

Projects

Text to Int | Python, GitHub, PyPI | Git, PyPI, PyPI Stats

April 2024

- Developed a Python-based tool to efficiently convert textual numbers into their integer equivalents.
- Showcased skills in Python programming, software packaging, and open-source collaboration.

My Portfolio Website | React, Tailwind, JavaScript, GitHub Pages, Framer Motion | Git

Feb – Mar 2023

- Designed a personal portfolio website to showcase coding skills and demonstrate expertise in UI and UX design.
- Utilized React, Tailwind, JavaScript, and Framer Motion to build the site, hosted on GitHub Pages.

Overleaf Template Contribution | L^AT_EX 2_ε, Overleaf, GitHub | Git

Jan 2025

- Contributed to an Overleaf template designed for personal statements and statements of purpose.
- Enhanced template structure by integrating dynamic and customizable placeholders to streamline personalization.

Text Summarizer | Python, Jupyter Notebook, Huggingface Transformers, NLTK | Git

Sep 2023

- Developed a tool to condense large texts using Huggingface Transformers and NLTK.
- Inspired by a similar project by Krishnaik06, with personalized enhancements.

YOLOv1 Implementation | Python, PyTorch, OpenCV | Git

Sep 2023

- Implemented YOLO v1 real-time object detection system as outlined in Joseph Redmon's paper.
- Developed using Python, PyTorch, and OpenCV, translating complex research concepts into functional code.

Work Experience

EdYou Abroad

April 2023 – June 2023

Internship

Mumbai, India

- Developed a commercial website using React and Supabase, showcasing creativity and technical expertise.
- Managed client communications, translating requirements into features and meeting project milestones promptly.

Technical Skills

Programming	C, C++, Bash/Shell, Rust, Java, SQL, Dart, Typescript, Javascript, Python, HTML, CSS, L ^A T _E X 2 _ε
AI/ML	PyTorch, TensorFlow, HuggingFace, NLTK, OpenCV; NLP, CV
Web	React, Next.js, Tailwind, Supabase, Firebase
Tools	Git/GitHub, Linux, AWS, GCP, Jupyter, Overleaf
IoT / Embedded	Raspberry Pi 5, Raspberry Pi Pico, Arduino, DIY drone prototyping