

Yash Thakkar

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EDUCATION

- Carnegie Mellon University**, Heinz College, Pittsburgh, PA Expected: December 2025
Master of Information Systems Management **CGPA - 4.13**
 - Coursework: Machine Learning, Deep Learning, Distributed Systems, Data Science & Big Data, Generative AI
- Dwarkadas J. Sanghvi College of Engineering**, Mumbai, MH, IN Graduated: May 2022
Bachelor of Engineering, Mechanical Engineering **CGPA - 3.92**

PROFESSIONAL EXPERIENCE

- TEEL Lab, Carnegie Mellon University**, Pittsburgh, PA
Frontend Developer September 2024 - Present
 - Accelerated user engagement by 23% by developing core frontend features for an AI education platform, based on Figma designs, using React, Redux, Typescript, and Tailwind CSS
 - Integrated i18n to enable multilingual support, enhancing accessibility and increasing potential user base by 250%
- Advect Systems Pvt. Ltd**, Remote, IN
Head of Software Engineering January 2022 - August 2024
 - Led development of Nanofactory, a 3D printer management and automation app with a decentralized networking architecture using Svelte (JavaScript library) and Flask (Python), reducing server costs by 100%
 - Generated a 20% increase in sales and a 35% reduction in inventory costs by applying Natural Language Processing (NLP) to analyze customer reviews and optimize product listings on Amazon
 - Boosted development time by 20% by introducing a robust Continuous Integration and Continuous Delivery (CI/CD) pipeline with Github Actions, Cloudflare, and Docker
 - Attained a 60% reduction in product listing time by developing a 3D environment with Three.js and Threlte for virtual product photoshoots
- Quantiphi Analytics Solution Pvt. Ltd**, Mumbai, IN
Business Analyst Intern August 2022 - November 2022
 - Enhanced team productivity by 20%, by implementing Agile methodologies across cross-functional teams
 - Designed impactful data visualizations in Tableau, driving a 25% increase in informed decision-making speed
- Wepitch Promotions**, Remote, IN
Software Engineer January 2022 - April 2022
 - Improved client website page load time by 50%, leading to higher user engagement
 - Increased SEO rankings and conversions by 60%, using HTML tags and loading JavaScript tags in correct order
 - Reduced deployment time by 40% by developing a CI/CD pipeline utilizing GitHub and AWS

ACADEMIC PROJECTS

- Speech Recognition using Transformers** November 2024 - December 2024
 - Developed an attention based end to end neural network for transcribing speech recordings into text using transformer architectures, delivering a character error rate of 10.9%
 - Utilized positional encoding for sequence order preservation and beam search decoding for inference
- SketchAI - Convert sketches into production images** September 2024 - December 2024
 - Engineered a Gen AI platform to convert user sketches into production images, automating Amazon Marketplace listing, resulting in a 40% reduction in listing time
 - Delivered a 92% success rate using Latent Diffusion Models (LDMs), fine-tuned Large Language Models (LLMs), and prompt engineering for accurate image generation and product description
- Utterance to Phoneme Mapping** September 2024 - October 2024
 - Implemented a sequence-to-sequence model for converting speech into phoneme sequences using Recurrent Neural Networks (RNNs) and Connectionist Temporal Classification (CTC), attaining a Levenshtein distance of 5.5
 - Performed hyperparameter tuning and optimized inferences with greedy and beam search decoders
- Face Classification and Verification** September 2024 - October 2024
 - Developed and trained a Convolutional Neural Network (CNN) using ResNet-101 architecture for face classification and verification tasks on the VGGFace2 dataset achieving a 9% Equal Error Rate (EER)
 - Incorporated Stochastic Gradient Descent (SGD) and Cross Entropy Loss for training and ArcFace Loss for refinement and various data augmentation techniques such as CutMix

SKILLS & CERTIFICATIONS

Frontend: Sveltekit, Sveltejs, Nextjs, Reactjs, Redux, Javascript, Typescript, HTML, CSS
Backend: Python, Django, FastAPI, Flask, Nodejs, REST APIs, Firebase, Appwrite, AWS Lambda, Java, C++
Machine Learning: PyTorch, Tensorflow, Scikit-learn, RNN, CNN, MLP, Numpy, Pandas, Matplotlib, Jupyter Notebook
Databases: SQL, NoSQL, IndexedDB, Firestore, AWS DynamoDB
Tools: Github, R, Figma, Docker, Excel, Tableau, Linux/Unix, Cloudflare, GCP, AWS, Nginx, Bash