Yash Thakkar

412-699-0335 • ythakkar@cmu.edu • yash-thakkar.com • linkedin.com/in/yashthakkar21/

EDUCATION

Carnegie Mellon University, Pittsburgh, PA   Expected Graduation: December 2025
Master of Information Systems Management, **CGPA - 4.04**
Coursework: Machine Learning, Deep Learning, Distributed Systems, Data Science, Generative AI, Statistics, Agile

Dwarkadas J. Sanghvi College of Engineering, Mumbai, MH, India   Graduated: May 2022
Bachelor of Engineering in Mechanical Engineering, **CGPA - 3.92**

EXPERIENCE

Software Engineer   September 2024 - December 2024
TEEL Lab, Carnegie Mellon University, Pittsburgh, PA
- **Frontend Development** - Developed core frontend features and reusable components for an AI education platform using React, Redux, Typescript, and Tailwind CSS, reducing overall development time by 19%
- **Accessibility Enhancement** - Integrated i18n to enable multilingual support, expanding potential user base by 2.5x

Head of Software Engineering   January 2022 - August 2024
Advect Systems Pvt. Ltd (3D Printing and Drones Startup), Remote, India
- **Software Development Life Cycle** - Led the end-to-end development of Nanofactory, a 3D printer management app with a decentralized architecture using Svelte (JavaScript library), Flask (Python Backend), and WebRTC
- **Unit Test & Integration Test** - Integrated end-to-end tests with Playwright, increasing test coverage by 13%
- **Containerization & CI/CD** - Introduced a robust Continuous Integration and Continuous Delivery (CI/CD) pipeline with Github Actions, Cloudflare, and Docker, reducing time-to-market by 40%
- **REST API Development & Automation -** Developed automation tools for Amazon Seller Central, Shiprocket, and Razorpay by building and integrating Python APIs and shell scripting, improving team productivity by 34%.

Business Analyst   August 2022 - November 2022
Quantiphi Analytics Solution Pvt. Ltd, Mumbai, IN
- **Data Modeling and Visualization -** Designed and implemented data models in Tableau to present business insights, enabling quicker access to actionable insights, reducing report generation time by 17%
- **Requirements Gathering -** Partnered with key stakeholders to translate business use cases to feature specifications, influence strategy, and cut down development costs for user stories by 35%

PROJECTS

Speech Recognition using Transformers - GitHub   November 2024 - December 2024
- **Neural Network Development -** Developed an attention-based end-to-end neural network for transcribing speech recordings into text using transformer architectures, achieving a character error rate (CER) of 10.9%

AI-Powered Design Generation - GitHub   September 2024 - December 2024
- **Full-Stack Development** - Engineered a Gen AI platform to convert user sketches into production-ready images, automating Amazon Marketplace listing, and resulting in a 39% reduction in listing time
- **Image Generation Pipeline -** Used a fine-tuned BLIP model for extracting descriptive captions, combining it with Llama-3.1-8b and BART Large-CNN for prompt engineering to generate high-quality images with Stable Diffusion-XL

Face Classification and Verification - GitHub   September 2024 - October 2024
- **Model Development -** 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)
- **Model Optimization and Data Augmentation -** 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

Programming Languages: Python, Java, C++, TypeScript, JavaScript, SQL, Bash
Tools: Docker, Amazon Web Services, Google Cloud Platform, Tableau, Linux/Unix, HTML, Hadoop, Spark, jQuery, Jira
AI & ML: TensorFlow, PyTorch, Scikit-learn, Neural Networks, Matplotlib, Pandas, Numpy, Jupyter Notebooks
Certifications: Data Structures and Algorithms, Database Management Systems