

Ashvath Venkataramana Cheppalli

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Portfolio: ashvathhh.github.io/Profile

EDUCATION

Northeastern University, Boston, MA

Sep. 2025 – Present

Khoury College of Computer Sciences

Expected Graduation: 2027

Candidate for a Master of Science in Artificial Intelligence

Related courses: Foundation of Artificial Intelligence, Algorithms, Applied Programming and Data Processing for AI

Rajalakshmi Engineering College, Chennai, India

Bachelor of Technology in Artificial Intelligence and Machine Learning,

2025

Related courses: Computer Vision, Databases, Natural Language Processing, Deep Learning

GPA: 7.49

TECHNICAL KNOWLEDGE

Languages: Python, JS, HTML, CSS, R

Databases: MySQL

Skills: Reinforcement Learning, NLP, Machine Learning, Deep Learning

Libraries: PyTorch, Keras, TF, Pandas, Scikit-learn

Certifications: Microsoft – Career Essentials in GenAI, Coursera- AI for everyone

WORK EXPERIENCE

Skillible, Chennai, India

AI Intern

July 2024 – August 2024

- Analyzed bias mitigation strategies and evaluated generative AI model performance across tasks, implementing advanced prompt engineering techniques to optimize transformer architecture outputs and large language model capabilities.

Anugraha Systems (Rajalakshmi Engineering College), Chennai, India

Web Development Intern

Jan 2023 – Jan 2023

- Developed end-to-end web applications using front-end and back-end technologies, implementing full stack solutions across the software development lifecycle.

PROJECTS

Geospatial Building Orientation Detection System

Aug 2025 – Present

- Built Python geospatial pipeline using Shapely, R-tree indexing and ijson streaming to process 11M+ building footprints with 95% coverage for CA/TX addresses.
- Implemented geometric Edge Analysis with outward normal selection and street name matching to resolve 180° orientation ambiguities on corner lots.
- Achieved 95% memory reduction and sub-second query times through spatial indexing and streaming JSON parsing.

Intelligent Human Detection System For Emergency Fire Evacuation Using YOLOv8

Aug 2024 – Apr 2025

- Fine-tuned YOLOv8 deep learning model on custom thermal imaging dataset achieving 89.6% mAP50 and 86.7% precision for human detection in low-visibility fire evacuation scenarios
- Developed Flutter mobile application with video processing pipeline, YOLOv8 inference engine for post-incident rescue analysis.

AI-Optimized Energy Consumption Forecasting System

Jan 2024 – Apr 2024

- Developed ML regression model on 1M+ consumption records achieving 0.038 kWh MAE (95% improvement) for real-time energy forecasting
- Performed feature engineering and EDA using Python, identifying peak consumption patterns for grid optimization

INTERESTS/ACTIVITIES

- President, Rotaract Club of Rajalakshmi Engineering College
July 2023 – Jun 2024
- Awarded Best Social Impact Project for developing a Mental Health Chatbot at Rajalakshmi Engineering College's Centre For Design Thinking
April 2024