

# AKASH HADAGALI PERSETTI

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## ACADEMIC QUALIFICATION

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### Master of Science (M.S.) in Computer Science

Luddy School of Informatics, Computing and Engineering

Indiana University Bloomington, United States

2024 – Present

Coursework: Applied Algorithms, Applied Machine Learning, Data Mining, Advanced Database Concepts, Cloud Computing, Software Engineering, Computer Networks, Security for Networked Systems

GPA: 3.8 / 4.0

### Bachelor of Engineering (B.E.) in Computer Science and Engineering

The National Institute of Engineering, Mysuru, India

2020 – 2024

Coursework: Computer Networks, Data Structures and Algorithms, Operating Systems, Cryptography, Theory of Computation

GPA: 3.7 / 4.0

## INTERNSHIP

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### Machine Learning Intern (Remote)

MyEdMaster LLC, Leesburg, Virginia, United States

Jun 2025 – Aug 2025

### Virtual Coach for Exercise Assessment

Team Size: 08

- Designed and implemented an exercise tracking system using Python and MediaPipe to analyze human posture and movement in real time.
- Developed posture-aware trackers for Kettlebell Front Raise, Seated Leg Extensions, and Jack Knives with automatic repetition counting and form validation.
- Implemented pose landmark extraction and joint angle calculations to detect incorrect form and provide real-time corrective feedback.
- Achieved over 92% repetition counting accuracy through calibration routines and motion consistency checks.

### Web Development Intern (Remote)

Squadcast Labs Private Limited, Bengaluru, India

Oct 2023 – May 2024

### SEO-Driven Web Performance and Content Optimization

Team Size: 09

- Designed and developed 18+ responsive landing pages and solution pages using Webflow, focusing on Core Web Vitals and performance optimization.
- Created and optimized 38 SEO-focused blog pages using keyword research and on-page optimization strategies.
- Implemented scripting techniques to delay and optimize third-party scripts, improving page load times.
- Conducted SEO analysis Google Search Console, PageSpeed Insights.
- Used mailmodo to design 2 newsletters as a part of year-end newsletter update.

## RESEARCH PROJECTS

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### Sentinel - AI-Powered Task Automation Assistant

Independent AI Project

Jan 2026 – Feb 2026

Team Size: 01

- Built an autonomous AI assistant using LangGraph and OpenAI GPT-4o-mini to handle complex multi-step tasks through a self-evaluating agent architecture with tool orchestration.

- Designed a state machine with worker-evaluator pattern where the worker executes tasks using available tools and an evaluator assesses completion against user-defined success criteria, creating a feedback loop for iterative refinement.
- Integrated a comprehensive toolkit including Playwright for browser automation, Python REPL for code execution, Wikipedia API, web search, file management, and push notifications to enable diverse task capabilities.
- Implemented persistent conversation memory using SQLite with LangGraph checkpointing to maintain context across sessions and enable resumable workflows.
- Developed a Gradio-based web interface allowing users to specify tasks and success criteria, with real-time display of agent reasoning, tool usage, and evaluator feedback throughout execution.

### Retail Sales Trend Analysis and Consumer Behavior Prediction

Indiana University Bloomington

Sep 2024 – Dec 2024

Team Size: 03

- Conducted a comprehensive data mining study on state-level U.S. retail data to identify sales trends and consumer behavior patterns.
- Applied K-means and hierarchical clustering, classification models (Logistic Regression, Decision Tree, Random Forest), association rule mining using Apriori, and recommendation systems.
- Generated predictive insights into sales volatility, cross-promotional opportunities, and targeted recommendations.
- **Individual Role:** Implemented clustering and classification models, performed data preprocessing, and developed recommendation pipelines.

### Paintora – Art Curation

The National Institute of Engineering, Mysuru

Sep 2023 – Jan 2024

Team Size: 04

- Developed a web-based platform using ReactJS, JavaScript, Python, HTML, and CSS for artists to showcase artwork.
- Integrated a Convolutional Neural Network (CNN) model to classify paintings into artistic categories.
- Designed and optimized backend database schemas for efficient storage and retrieval of user submissions.
- **Individual Role:** Backend development and database design.

### Sculptica – Online Gym Management System

Independent Full-Stack Project

Nov 2022 – Jan 2023

Team Size: 01

- Designed and developed a full-stack online gym management platform for administrators and users using ReactJS, Node.js, and MySQL.
- Implemented secure authentication, role-based access control, and normalized relational database schemas to replace manual ledger systems.
- Automated core gym workflows including member management, activity tracking, and administrative operations.
- Developed a BMI calculator and BMI-based diet recommendation module to enhance user engagement and personalization.
- Integrated Razorpay payment gateway to support secure online membership payments and transaction handling.

## TECHNICAL SKILLS

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**Languages:** Python, C++, Java

**Databases:** MySQL, MongoDB, PostgreSQL

**Operating Systems:** Unix / Linux

**Development:** JavaScript (Node.js, React), HTML, CSS, FastAPI

**Machine Learning:** Clustering Algorithms & Classification Models, CNN, Mediapipe

**Agentic AI:** OpenAI Agents SDK, CrewAI, LangGraph, AutoGen, Model Context Protocol (MCP), Strands Agents

**Cloud Platforms:** Amazon Web Services (AWS), Google Cloud Platform (GCP), Microsoft Azure

**CI/CD & DevOps:** GitHub Actions, Docker, Terraform (AWS/Azure)

**Other:** Blockchain Development, Content Management Systems

## **AWARDS AND ACHIEVEMENTS**

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Won Abacus and Mental Mathematics competition at SEMAS, a national-level competition held in Chennai, Jun 2013.

## **CERTIFICATIONS**

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Completed a 12-week online course on Introduction to Machine Learning (NPTEL), offered by IIT Madras, covering neural networks, regression, and KNN, Oct 2022 – Jan 2023.

## **CO-CURRICULAR ACTIVITIES**

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- Participated in a seminar on Green Computing, The National Institute of Engineering, Mysuru, Dec 2023.
- Attended a two-day workshop on Artificial Intelligence at Indian Institute of Technology Bombay, Mumbai, Dec 2022.

## **EXTRACURRICULAR ACTIVITIES**

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- Participated in a 15-kilometer Cyclothon during Technieks, the annual technical and cultural fest, May 2022.
- Organized football and cricket matches during the annual sports meet, Apr 2023.
- Volunteered for organizing a treasure hunt event for the GeeksForGeeks Club, Jan 2022.
- Supervisor, Bookmarket Eatery (IU Dining and Hospitality), Indiana University Bloomington – Oversaw daily operations and staff scheduling.

## **COMMUNITY SERVICE**

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- Promoted Digital India Campaign by initiating UPI payments to locals in Mysuru, Jan 2024.
- Participated in Swachh Bharat Abhiyan in Mysuru, Nov 2023.
- Taught basic computer skills and Microsoft Office to 80 underprivileged students at Railway Workshop Government School, Mysuru, Oct 2022.