

UTTAKARSHINI MISHRA

B.Tech CSE • AI/ML Developer • Full-Stack Engineer • Research Author

+91 6386356199 • soumyam693@gmail.com • Sadar, Allahabad – 211003

linkedin.com/in/uttakarshini-mishra-96b037325 • github.com/Uttakarshin

EDUCATION

Bachelor of Technology — Computer Science & Engineering May 2026

GLA University, Mathura • SPI: 8.62 • CPI: 6.59

Intermediate (Class XII) May 2021

Girls High School and College, Allahabad • Score: 83%

High School (Class X) May 2019

Girls High School and College, Allahabad • Score: 75%

RESEARCH PUBLICATION

"Comparative Study of Machine Learning and Deep Learning Approaches for Detecting Crop Diseases from Leaf Images"

Published under NGNDAI 2026 — Microsoft Research CMT • Submission ID: 462

- Conducted comparative analysis of traditional ML classifiers vs. CNN-based models for agricultural leaf disease detection.
- Deep learning architectures (MobileNetV2, ResNet) outperformed ML methods (SVM, Random Forest) in accuracy and adaptability under varied lighting conditions.

INTERNSHIP & TRAINING

Business Development Intern June 2026 – Present

Build Brand Factor Pvt. Ltd. • Work from Home

- Working in the Business Development department, supporting outreach and lead generation initiatives targeting educational institutions.
- Responsibilities include identifying potential clients, building CRM databases, and assisting in sales and branding efforts for colleges and universities.

Job Oriented Value Added Course June – July 2024

Coding Blocks

- Gained foundational knowledge in Machine Learning and Data Analytics workflows.
- Completed the Bengaluru House Price Prediction project using Python and core ML techniques.

PROJECTS

Agro Vision Hub (AgriScan) — Full-Stack AI Agriculture Platform Feb 2026 – May 2026

github.com/Uttakarshin/agro-hub • Live: agro-vision-hub--s45527129.replit.app

- Built a production-grade full-stack AI crop disease detection platform powered by Google Gemini 2.5 Flash using a two-stage prompt pipeline (image validation + structured JSON diagnosis) supporting 10+ crops.
- Trained MobileNetV2 transfer learning model on the PlantVillage dataset (~54,000 images), achieving ~96% validation accuracy with two-phase fine-tuning and data augmentation.
- Developed a React + Vite + TypeScript monorepo (pnpm workspaces) with Express API backend, PostgreSQL + Drizzle ORM, Clerk authentication, and full account/data cascade deletion.
- Dashboard features: health stats, weekly scan charts (Recharts), disease distribution pie charts, AI farming tips (6-hour cache), dark/light/system theme, multi-language UI, QR code scanning, and searchable history.
- Architected with OpenAPI spec, Zod-validated schemas, typed API client library, and esbuild-bundled Express server across a structured monorepo with pnpm workspaces.

Tech Stack: React (Vite), TypeScript, Tailwind CSS v4, shadcn/ui, Wouter, Framer Motion, Recharts, TanStack Query, Node.js, Express, PostgreSQL, Drizzle ORM, Google Gemini 2.5 Flash, TensorFlow, Keras, MobileNetV2, Clerk Auth, pnpm

Plant Disease Detection — Deep Learning Research Model Jan 2026 – Mar 2026

github.com/Uttakarshin/plant-disease-detection

- Developed standalone CNN model for multi-class crop leaf disease classification as the research basis for the NGNDAI 2026 publication (Microsoft Research CMT, Submission ID: 462).
- Benchmarked MobileNetV2 and ResNet against classical ML algorithms (SVM, Random Forest) across 45+ disease categories, demonstrating significant CNN superiority for image classification.
- Implemented ImageDataGenerator augmentation pipeline and evaluated models via confusion matrix and per-class classification report to validate generalization across field conditions.

Tech Stack: Python, TensorFlow, Keras, MobileNetV2, ResNet, Scikit-learn, Jupyter Notebook, PlantVillage Dataset

VisionVerseAI — Multimodal Generative AI Application June 2025 – July 2025

github.com/Uttakarshin/--VisionVerseAI

- Integrated Google Vertex AI Imagen 3.0 for AI-driven dynamic image generation from text prompts, building two complete Jupyter Notebook pipelines with modular architecture.
- Designed CLI-compatible Python tools supporting prompt-based multimodal (text + image) workflows; explored advanced GenAI capabilities combining text understanding and image synthesis.

Tech Stack: Python, Google Vertex AI, Imagen 3.0, Jupyter Notebook

PriceWiseHomes — Bengaluru House Price Prediction Sept 2025 – Oct 2025

github.com/Uttakarshin/--PriceWiseHomes-

- Applied Linear Regression, Decision Tree, and Random Forest to predict Bengaluru real-estate prices; built an interactive HTML/CSS/JS frontend for live price prediction.
- Performed full data preprocessing pipeline: outlier removal, feature scaling, one-hot encoding for categorical variables, and feature engineering.
- Optimized model accuracy through cross-validation and hyperparameter tuning techniques.

Tech Stack: Python, Pandas, NumPy, Scikit-learn, Jupyter Notebook, HTML, CSS, JavaScript

E-Library Management System — Frontend Project Mar 2025 – Apr 2025

github.com/Uttakarshin/E--library-management

- Designed and implemented a fully responsive web interface for digital library management, combining technology with traditional library functions.
- Built interactive book listings with search and categorization features using vanilla JavaScript for enhanced UX.

Tech Stack: HTML, CSS, JavaScript (Vanilla)

TECHNICAL SKILLS

Programming: C, Python, Java, JavaScript, TypeScript

Web Development: HTML, CSS, React.js (Vite), Node.js, Express.js, Tailwind CSS v4, shadcn/ui

ML / Deep Learning: Scikit-learn, TensorFlow, Keras, MobileNetV2, ResNet, Pandas, NumPy

Generative AI: Google Gemini 2.5 Flash, Google Vertex AI (Imagen 3.0), Prompt Engineering

Databases: PostgreSQL, MySQL, Drizzle ORM

Dev Tools: Git, GitHub, VS Code, Jupyter Notebook, pnpm, esbuild, Replit

Cloud / Auth: AWS (AI Practitioner, Cloud Practitioner), Google Vertex AI, Clerk Auth

Soft Skills: Problem Solving, Communication, Team Collaboration, Adaptability, Research

HACKATHONS & COMPETITIONS

Bharatiya Antariksh Hackathon 2025 2025

Organized by ISRO & Hack2Skill

- Certified participant; developed AI-driven solutions to real-world space challenges in this national-level hackathon.

Hybrid Hack — AARUUSH '25 July – August 2025

Organized by SRM Institute of Science & Technology (SRMIST)

- Certificate of Participation in the hybrid hackathon hosted at SRMIST's annual techno-management fest.

Super Ops Superhacks Hackathon

- Certificate of Participation awarded for competing in the Super Ops Superhacks hackathon.

Gen AI Exchange Hackathon

- Certificate of Participation awarded for developing generative AI solutions at the Gen AI Exchange hackathon.

CERTIFICATIONS & LICENSES

- Deloitte Australia — Technology Job Simulation — Forage • ID: sQc4EKG3pvs4gJk5T
- Deloitte Australia — Data Analytics Job Simulation — Forage • ID: S8QZeRcx8uDDGK6kD
- Deloitte Australia — Cyber Job Simulation — Forage • ID: cJee8BWd6bFAry7J3
- Build Real World AI Applications with Gemini and Imagen — Skill Badge — Google
- AWS AI Practitioner — Intro to AI/ML on AWS — Amazon Web Services
- AWS Cloud Practitioner Essentials — Cloud Architecture Fundamentals — AWS
- AWS CLI Proficiency — Managing AWS via Command Line Interface — AWS
- Amazon Q Developer Course — AI Application Development — AWS
- AWS ElastiCache for Redis Data Modeling — Optimizing Cache Performance — AWS
- AWS Managing Application Scale with Amazon RDS — Database Scaling — AWS

DECLARATION

I hereby declare that all the above information is true and correct to the best of my knowledge.

— Uttakarshini Mishra