

# Anish Pandey

Caldwell, NJ | +1 (201)-328-4561 | [apandey2@caldwell.edu](mailto:apandey2@caldwell.edu) | [LinkedIn](#) | [GitHub](#) | [Website](#)

## EDUCATION

### Caldwell University

Bachelor, Computer Science, Mathematics

May 2027

Caldwell, New Jersey

- **Achievements:** Dean's List, Presidential Scholar
- **Coursework:** Data Structures, Algorithms, Artificial Intelligence, Linear Algebra, Computational Models, Full Stack Development, Database Management Systems, Probability and Statistics, OOP, Calculus I & II, Mobile Development

## SKILLS

**Languages & Frameworks:** Python, Javascript, C++, C#, TypeScript, SQL, React, Node.js

**AI/ML & Data:** PyTorch, TensorFlow, scikit-learn, OpenCV, FAISS, Hugging Face, pandas, NumPy, OpenAI API, LangChain

**Infrastructures and Tools:** AWS (Lambda, RDS, S3, EC2), Docker, Kubernetes, PostgreSQL, MongoDB, MQTT, Git, Linux, Postman

## AWARDS

- **First:** HACKNYU 2025 | 650+ participants, 120+ projects New York University
- **Third:** CalHACKS x Anthropic x Amazon | 3400+ participants, 700+ projects University of California Berkeley
- **Second:** HACKNJIT 2024 | 550+ participants, 75+ projects New Jersey Institute of Technology
- **Finalist:** HACKMIT x Fetch Ai x Anthropic 2025 | Top 10 of 365 projects Massachusetts Institute of Technology
- **First:** CougarHacks 2024 Caldwell University

## PROFESSIONAL EXPERIENCES

### Google x New York University | Software Project Lead

Feb 2025- May 2025

- Built Dristi, an AI-powered wearable for visually impaired navigation, architecting a C#/ASP.NET frontend, Python backend, Firebase real-time synchronization, and a Raspberry Pi vision pipeline for low-latency edge inference.
- Fine-tuned PyTorch Mask R-CNN with custom segmentation heads on 4,200 annotated frames, improving segmentation mAP by 23% (0.48 → 0.59) for real-time obstacle detection.
- Integrated multiple sensors (MPU6050, SW520D, biometric) over I2C protocol, enabling synchronized real-time monitoring of posture, heart rate, and ambient conditions at sub-second latency.
- Developed an embedded multimodal AI assistant integrating Geolocation, Claude, Eleven Labs, and one-click SOS, delivering voice-guided navigation and accessibility features for visually impaired users.

*Python, C#, WebSocket, Threading, Serial, CI/CD, LLMs, PyVision, ML, Raspberry pi, AI TTS, Embedded Systems*

### GeniusLaw | Lead Software Engineer

Nov 2025 – Present

- Led a 4-engineer team building a SaaS CRM and mobile apps used by 510+ attorneys across 350+ law firms, delivering 99.98% uptime and increasing MRR by 43%.
- Integrated a RAG-powered AI litigation platform capable of generating 450+ page complaints and motions, reducing turnaround from 2 months to 3 days.
- Built GPT-4 + DocuSign retainer automation reducing agreement turnaround from 2 days to 15 minutes, eliminating a major client bottleneck.
- Designed PostgreSQL architecture with connection pooling and index optimization, powering AI summarizations across reports, mobile apps and dashboards for over 1600+ cases.
- Built Pronto! a cross-platform mobile app integrating WebRTC-based VoIP communication and Stripe and EcSuite PCI complaint payment integrations for live attorney connection, deployed across 13 states.

*AWS, RDS, Typescript, Terraform, Python, APIs, Postgres, React, Vector Databases, LLMs, Redis, CI/CD, Git, Async*

### Lura Health | Engineer Intern

Sep 2024 - Nov 2024

- Built React/Node.js platform with JWT auth, and role-based access securing access to company proprietary data across 7 user roles.
- Designed partitioned PostgreSQL schemas for time-series sensor data with composite indexing, cutting ML preprocessing query time by 15%.
- Containerized ML inference pipeline with Docker, standardizing deployments across local and staging environments and reducing environment failures by 23%.
- Built automated data validation pipeline catching malformed health records before ML ingestion, reducing bad data reaching the model by 85%.

*Python, C++, React, Node.js, TensorFlow, Docker, Snowflake, Langchain*

### Caldwell University | Machine Learning Researcher

Jan 2025 - Present

- Engineered an autonomous drone on a Jetson Nano using Python and OpenCV for real-time computer-vision and machine-learning object detection, enabling precise pesticide spraying that reduced chemical waste.
- Built SVM classifier achieving 97% soil/vegetation detection accuracy, reducing chemical usage by 55% and improving crop yield measurably.
- Developed flight-planning engine using segmentation, clustering, and path planning algorithms, boosting autonomous UAV coverage efficiency by 30%.
- Engineered coordinate transformation and calibration algorithm via adaptive interpolation, achieving 65% higher mapping precision than standard consumer UAV GPS systems.

*Python, Clustering, TensorFlow, Firebase, Pixhawk, Ardupilot, Jetson Nano, ROS, SVM, APIs*

## LEADERSHIP AND PROJECTS

### Caldwell Robotics | Founder and President

- Founded and scaled university robotics org to 70+ members driving AI, engineering, and cross-disciplinary community impact projects.
- Secured university partnerships to establish Caldwell Makerspace, procuring 3D printers, CNC machines, and robotics kits as campus fabrication hub and launched inaugural Robot-Soccer Hackathon attracting 250+ participants

### Bagaicha

- Engineered ESP32 IoT sensor network with MQTT streaming and TensorFlow stress-detection model achieving 92% accuracy across 1,000+ plant readings.
- Built React dashboard on AWS Lambda and RDS with automated nutrient-control microservices, delivering 99% data reliability and 45% faster insights.

### Concave

- Designed autonomous ROS agriculture pipeline with OpenCV and GPS field mapping, improving UAV coverage efficiency by 40%.
- Trained PyTorch crop health and ripeness classifier on 5,000+ field images, enabling real-time precision harvesting at 94% accuracy.