

HIMAL GAUTAM

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EDUCATION

University of North Texas

Bachelor of Science in Computer Science + Geographic Information Systems

– GPA: 3.89/4.00, Dean's List

Denton, TX

Expected Dec 2027

Caldwell University

Bachelor of Science in Computer Science

Caldwell, NJ

Jan 2024 – May 2025 (Transferred to UNT)

EXPERIENCE

Peer Mentor

University of North Texas

- Mentored and supported students across three Computer Science I (CSCE 1030) lab sections, assisting with debugging, algorithm design, and programming exercises.

Present

Denton, TX

Undergraduate Research Assistant

University of North Texas

- Built an end-to-end geospatial segmentation pipeline using SAM 2.1 + Segment-Geospatial: tiled multi-GB NAIP/CHM GeoTIFFs, ran batched PyTorch/CUDA inference, merged georeferenced masks, and prepared ArcGIS-ready outputs for tree-crown mapping.
- Automated georeferenced mask merging and raster tiling for large-scale GIS integration, optimizing model throughput by 40%.
- Conducted precision validation against field datasets and prepared ArcGIS-ready shapefiles for downstream ecological modeling.

Summer 2025

Denton, TX

Peer Tutor – Academic Success Center

Caldwell University

- Provided academic support for CS196 (Intro to OOP), CS230 (Front-End Web Development), MA140 (Discrete Mathematics), EN111 (College Writing), CO230 (Communication Skills), and HI102 (History).

Fall 2024

Caldwell, NJ

Co-Founder

Moksha Enterprises Pvt. Ltd.

- Co-founded a Geo-ICT startup specializing in municipal-level land-use zoning and GIS-based planning.
- Assisted GIS experts in validating spatial datasets using ArcGIS Pro and Google Earth, ensuring alignment with field-collected data and cadastral layers.
- Participated in on-site field surveys and meetings with local authorities to verify land classifications and ensure compliance with national mapping guidelines.

Jan 2023 – Present

Birendranagar, Nepal

PROJECTS

Kozi.REST – AI Powered Sleeping Tracker | *Raspberry Pi, ElevenLabs API, Gemini API*

HackUTA

- Engineered a sleep tracker integrating Pi sensors, environmental monitoring, and AI-driven audio summaries.

RunSafe – Smart Running Tracker | *React, Node.js, Google Maps API, Open-Meteo API*

HackRice

- Built a full-stack route safety app ranking paths by air-quality exposure, generating weekly health PDFs, and integrating real-time AQI forecasts.

Baymax – AI Mental Health Assistant | *React, RESTful API, MongoDB Atlas, Stripe*

HackDartmouth

- Engineered a GPT-driven mental-health web assistant with real-time chat, session logging, and secure payment handling through integrated RESTful APIs and cloud database in 24 hours.

Dristi – Smart Cane | *Raspberry Pi, GPS, Ultrasonic Sensors, Haptics*

HackPrinceton

- Engineered a smart cane prototype featuring haptic feedback and real-time alert logic for safe navigation.

TECHNICAL SKILLS

Languages & Frameworks: Python, JavaScript, TypeScript, C/C++, Java, React, Node.js, Express.js, Tailwind CSS
Technologies & Tools: ArcGIS Pro, Google Earth Engine, PyTorch, CUDA, Git, REST APIs, Linux, NumPy, Pandas, Matplotlib, MongoDB, SSMS, Lucidchart, PWA, Raspberry Pi