

# CH S K CHAITANYA

## Aspiring Data Scientist

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🐙 github.com/CH-S-K-CHAITANYA 🌐 Portfolio

### Summary

Aspiring Data Scientist with experience in IoT data systems, agritech solutions, and applied machine learning. Built dashboards, optimization algorithms, and ML-based detection models, seeking an AI/ML internship to strengthen model-building skills.

### Skills

**Programming & Querying:** Python, SQL

**Web Development:** HTML, CSS, JavaScript, Django

**Tools:** MS Excel

### Experience

#### Co-Founder

March 2025 – Present

*Agromize Services Pvt. Ltd.*

*Agritech Startup*

- Co-founded an agritech startup focused on AI-driven precision agriculture solutions.
- Contributed to the design and assembly of a rover integrated with a robotic arm for targeted agricultural operations.
- Developed a YOLOv8-based weed detection system for sesame crops, trained on 1,300 labeled images and achieved **0.896 mAP@0.5** with balanced precision (0.852) and recall (0.851).
- Currently working on improving detection performance for targeted weed management applications.

### Projects

#### News Authenticity Checker Using Semantic AI | *Python, SBERT, Streamlit*

Aug 2025 – Oct 2025

- Developed a semantic fake news verification system using Sentence-BERT (MiniLM) to generate contextual embeddings for user-submitted text and trusted news articles.
- Implemented cosine similarity-based matching with threshold-driven classification (Likely Real / Uncertain / Likely Fake), ensuring robustness against paraphrased misinformation.
- Designed a modular pipeline with URL extraction (Newspaper3k), preprocessing, embedding generation, and real-time similarity computation.
- Maintained a structured trusted knowledge base with embedding storage for auditable and explainable authenticity decisions.

#### Optimized Geo-PIN Hub Selection for Courier Delivery | *Python, Flask, Mappls API*

Oct 2025 – Dec 2025

- Designed a Geo-PIN-based hub selection system to optimize courier routing using geospatial proximity and load-aware decision logic.
- Implemented a Flask backend with CSV-based hub datasets and dynamic load filtering to avoid overloaded hubs (↓66%).
- Developed a heuristic routing engine using Haversine distance and hop-based scoring (score = progress \* 10 + (100 - load) - distance).
- Integrated resilient geocoding (Nominatim + Photon fallback) and Mappls SDK for real-time route visualization.

### Patents

- Indian Patent Application Published – “An Artificial Intelligence Based IoT and LiDAR/LoRa System and Method for Optimizing Agriculture Yields”, Application No. 202441073016 A, Published in Patent Office Journal No. 40/2024 (04 October 2024).

### Achievements & Certifications

- **2nd Prize – IDEATHON 2025 (State Level):** Secured 2nd place at ISTE Karnataka Section’s innovation competition for presenting “Optimized Geo-PIN Hub Selection for Courier Delivery” (December 2025).
- **2nd Prize – Business Plan Competition 2025:** Awarded for presenting an agritech startup model focused on AI-driven precision agriculture solutions (May 2025).

- **3rd Place – Smart India Hackathon (Internal Round), 2025:** Secured 3rd position at the college-level selection round (September 2025).
- **NPTEL – Database Management Systems**
- **NPTEL – Design and Analysis of Algorithms**
- **Infosys Springboard – Python Programming**

## Education

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**East Point College of Engineering & Technology**

**2023 – 2027**

*B.E. in Computer Science and Engineering*

*Affiliated to Visvesvaraya Technological University (VTU)*