

ABIMANYU KULATHINGAL ANUPKUMAR

WRITE CODE. WRECK CODE.
REBUILD BETTER.

PROFILE

Computer Science student driven by curiosity and a love for building things that work. I have a strong foundation in core programming (Java, C++) and data science, which I've used to predict stock trends and analyze business metrics. Recently, I've expanded into full-stack development, building apps that solve specific problems —like better navigation or secure communication. I enjoy the logic of backend systems just as much as the creativity of frontend design, and I'm looking for a role where I can use both to make an impact.

SKILLS

- Languages:** Python, Java, C, C++, JavaScript, TypeScript, SQL, R.
- Web Development:** Next.js (App Router), React.js, Tailwind CSS, HTML5, CSS3, Node.js
- Data & ML:** Pandas, NumPy, Scikit-learn, Matplotlib, TensorFlow, Tableau
- Tools & Platforms:** Git/GitHub, Linux, VS Code, Firebase, Vercel, Mapbox API.

INTERNSHIPS

Data Analytics Intern

Clustrex Data Private Limited, Chennai
May 2025 – June 2025

- Worked on the project “Data Analysis with Python and Tableau.”
- Analyzed datasets and visualized insights using Python and Tableau.
- Demonstrated strong commitment, exceeding expectations on assigned deliverables.
- Gained hands-on experience in data analytics and reporting.

Portfolio

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 abimanyuka.official@gmail.com
 Abimanyu-KA
 120F, Rostrevor Garden, Railway officers Enclave, Anna Salai, Teynampet, Chennai - 600018

EDUCATION

2023 - Present

VELLORE INSTITUTE OF TECHNOLOGY, CHENNAI

Bachelor of Technology in Computer Science and Engineering (Core)
CGPA: 8.2/10

2019 - 2023

KENDRIYA VIDYALAYA ISLAND GROUNDS, CHENNAI

PCM - CS Science Stream
12th : 458 (91%)
10th : 474 (94.8%)

CORE SKILLS

- Problem Solving
- Analytical Thinking
- Creativity
- Debugging

SOFT SKILLS

- Teamwork
- Adaptability
- Leadership
- Attention to Detail
- Effective Communication

LANGUAGES

- English (fluent)
- Hindi (conversational)
- Tamil (conversational)
- Malayalam (native)
- German (A1 Level)

PROJECTS

Mirage – Steganography & Secure Transmission Engine

Tech: Next.js (TypeScript), Python (FastAPI), AES-GCM, Pillow, Tailwind CSS

- Engineered a full-stack steganography system to embed encrypted binary files (PDF/ZIP) inside PNG images using LSB bit-plane manipulation.
- Designed a seeded chaos-based embedding algorithm to stochastically scatter payload bits, resisting linear and statistical detection.
- Implemented a Decoy Protocol enabling dual-payload extraction for plausible deniability under coercion.
- Built a client-side forensic visualization tool using the HTML5 Canvas API to analyze bit-plane entropy and payload integrity.

Coords – Real-Time Social Navigation

Tech: React, Mapbox GL, Supabase Realtime, PostgreSQL/PostGIS, Turf.js

- Architected “Sync Groups,” a real-time multiplayer system enabling riders to share live location, speed, and heading on a shared map.
- Implemented ephemeral WebSocket telemetry broadcasting (<100ms latency) using Supabase Realtime, avoiding high-frequency database writes.
- Developed a Sinuosity-based route scoring algorithm with Turf.js to prioritize high-curvature, rider-preferred roads over fastest routes.
- Built a secure geospatial backend using PostGIS and Row Level Security (RLS) for private group routing and persistence.

Formula 1 Race Intelligence & Predictive Analytics Platform

Tech: Python, Scikit-Learn, Random Forest, Tableau, Streamlit

- Architected “Sync Groups,” a real-time multiplayer system enabling riders to share live location, speed, and heading on a shared map.
- Implemented ephemeral WebSocket telemetry broadcasting (<100ms latency) using Supabase Realtime, avoiding high-frequency database writes.
- Developed a Sinuosity-based route scoring algorithm with Turf.js to prioritize high-curvature, rider-preferred roads over fastest routes.
- Built a secure geospatial backend using PostGIS and Row Level Security (RLS) for private group routing and persistence.

CERTIFICATIONS

- Scientific Computing with Python, FreeCodeCamp
- TECHO WORKSHOP SERIES'24 held by IIT Madras
- AI Bootcamp by CampK12

VOLUNTEER WORK

Volunteer Tutor

Chennai Volunteers, Chennai

- Volunteered as a tutor for underprivileged children, helping them develop foundational academic skills.

Event Volunteer, Pet Adoption Drive

iAdopt, Chennai – March 2023

- Assisted at the “Sun, Sand & Paws” adoption and fundraiser event, supporting rescued cats and dogs in finding permanent homes.

EXTRACURRICULAR

- VIT Chennai Men's Tennis Team - Represented the university in intercollegiate tournaments as part of the men's team.
- Electronic Keyboard (Trinity College London): Completed Grade 3
- Member of CodeChef Club and CSED Club
- Goethe German A1 level certification
- Completed summer school on Astronomy & Astrophysics conducted by M. P. Birla Institute of Science and Technology, Bangalore