

DHANUSH KUMAR V

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EDUCATION

Sri Sivasubramaniya Nadar College of Engineering
B.Tech Information Technology

September 2022 - Graduating 2026
CGPA: 7.24

EXPERIENCE

Research Intern, Sri Sivasubramaniya Nadar College of Engineering

May 2025 - June 2025

- Developed degraded palm-leaf manuscript restoration using a hybrid **Vision Transformer–CNN model** in **Python**, improving anomaly reduction and achieving a PSNR (Peak Signal-to-Noise Ratio) of **29.86 dB** in image quality evaluation.
- Generated and augmented 1,000+** training image pairs (occlusion, masking, cracks, brightness variation, flipping, manual damage simulation) in **Python**, ensuring data diversity and improving model robustness to varied degradation patterns.

PROJECTS

Bus Route Optimization, Sri Sivasubramaniya Nadar College of Eng.

Feb 2025 - May 2025

- Built a **multi-objective bus routing system** using **Python, Genetic Algorithms, Google OR-Tools, and OSRM**, optimizing bus capacity utilization, number of buses, and travel distance, attaining **60% faster convergence**.
- Collected transportation data from the college and developed an **interactive dashboard and mobile app** using **HTML/CSS, Flutter, and Firebase** for route visualization, attendance tracking, and real-time bus monitoring.

DDoS Detection System, Sri Sivasubramaniya Nadar College of Eng.

Aug 2024 - Dec 2024

- Designed a real-time **DDoS Detection System** using **Python, Scapy, Apache Kafka, and XGBoost**, achieving **99.97% accuracy** in anomaly detection through data preprocessing, feature selection (mutual information, correlation analysis), and hyperparameter optimization.
- Built a **data visualization dashboard** to monitor network traffic and classification results, providing actionable insights for identifying anomalies.

Faculty Workload Portfolio, Sri Sivasubramaniya Nadar College of Eng.

Apr 2024 - Jun 2024

- Developed a **web-based Faculty Workload Management System** using **Python (Django), HTML, CSS, JavaScript, and MySQL**, role-based access, and automated workload allocation to ensure fair and balanced distribution, over **30+** faculty.
- Implemented **reporting features** to generate workload insights, real-time updates, and dashboards for administrators, improving transparency, decision-making, and academic efficiency.

SKILLS

Programming Languages: Python, C++, Ruby, SQL

Libraries and Frameworks: Pandas, NumPy, Scikit-learn, Seaborn, and Matplotlib

Tools and Technologies: Git/GitHub, Docker

Design: Figma, Canva

Subjects of interest: Operating Systems, Networks, Data analytics, Machine Learning, and Data Structures & Algorithms

Languages: Tamil, English

ACTIVITIES

Web Designer, Instincts'25

March 2025

- Designed important visual and user interface components (UI/UX) for the main website of the college's yearly cultural festival.

Public Relations (Point of Contact), Invente'24

September 2024

- Served as the official PR point of contact for Invente, the yearly intercollege technical symposium, handling external communication and public relations.

SCHOLARSHIPS

State Merit-Based Scholarships, Government of Tamil Nadu

Sep 2022

- Awarded a full scholarship throughout undergraduate studies for representing Tamil Nadu at the National Level Archery Championship, and for academic as a government school graduate

HACKATHON

Hack4Purpose, Dpurpose foundation and United Nations UNLEASH

June 2024

- Selected among **Top 100 teams** in India by Dpurpose Foundation and United Nations UNLEASH for proposing a web-based solution **bridging the gap** between startups and companies.

CodeVolt'25, Raptee HV & Zoho, VIT Chennai

March 2025

- Secured **Top 50/150+ teams** at, by developing a **machine learning web application** that applied **statistical analysis** to forecast **EV charging station demand** and classify **grid load stability**, delivering actionable insights through a user-friendly interface.

EXTRA-CURRICULAR ACTIVITIES

South-West Zone Sports event, hosted by Ministry of Sports

December 2023

- Qualified and represented Anna University at the zonal level Archery tournament held in Punjab.

All India National Sports Event, conducted by Ministry of Sports

December 2024

- Represented Anna University as a national-level archer at the All India tournament held in Punjab.