Anbuselvi S

Research Scholar, Ramanujan Computing Centre, Anna University

✉ anbuselvi.2603@gmail.com   📞 +91-94449-45754   ⓞ Anbuselvi26   in anbuselvi26

Researcher focused on interpretable security-oriented language models, with interests in model behaviour understanding, representation learning, and trustworthy AI. Currently building foundations in XAI methods, model fine-tuning, and efficient edge deployment.

Core Competencies

- Machine learning model development, evaluation, and optimisation
- Data handling across structured and textual-oriented datasets
- Prototype development using web, Android, and IoT-based pipelines
- Strong foundation for future academic research and teaching roles

Technical Tools

- **Programming Languages:** Python
- **Data Science & ML:** Pandas, NumPy, Scikit-learn, PyTorch
- **Web Development:** HTML, CSS, Javascript
- **Databases & Tools:** MySQL, SQLite, GitHub

Projects

- **GNN-based Malware Detection**   2024
  Mini Project   *GitHub Link*

  Built a Graph Neural Network to classify malware from API-call graphs, achieving 98.67% accuracy and demonstrating the value of graph-based representations for security analytics.

- **20-20 Challenge**   2023
  Full-Stack Development Project   *GitHub Link*

  Developed a MERN-based mobile platform for interactive challenges with a focus on UI/UX, back-end API design, and database structuring.

- **Food Spoilage Monitor**   2024
  IoT Project

  Designed an ESP32 + MQ4 gas-sensing system for real-time spoilage detection, featuring LED alerts and automated email notifications.

Education

- **PhD – Interpretable SLM for Cybersecurity**   2025 – Present
  Ramanujan Computing Centre, Anna University   *Chennai, India*

  Research Guide: Dr. A. John Prakash, Associate Professor

- **Integrated M.Sc. Computer Science (CGPA: 8.25)**   2020 – 2025
  College of Engineering Guindy, Anna University   *Chennai, India*

Internships

- **Spheruler Solutions Pvt Ltd**, IIT-M Research Park, Chennai   *Jun 2023 – Dec 2023*
  Algorithm Developer Intern

  - Converted 3D spatial data between SHP and CSV formats as part of the Index #5 Open Challenge, enabling accurate and reversible data restoration.
  - Designed preprocessing routines to clean, standardize, and organize geospatial datasets.
  - Improved data compatibility to support downstream analytics and visualization workflows.

- **Spheruler Solutions Pvt Ltd**, Chennai   *Feb 2025 – May 2025*
  Software Developer Intern

  - Captured spatial object data using Android-based acquisition pipelines and custom camera modules.
  - Extracted key visual features from images to support 3D object modelling and reconstruction.
  - Structured and stored processed data in SQLite databases for future machine-learning-based experiments.

Professional Roles & Leadership

- Chairperson – Mathrix Symposium, Department of Mathematics, CEG (2025): Led event planning, coordination, and academic outreach.

- Organizer – CEG Tech Forum (Initiatives Domain) (2022–2023): Led the institute-wide E-waste collection and sustainability initiative.

- Placement Representative (2022–2023): Coordinated off-campus internship and placement processes for the department.

- Creative Head & Social Media Manager – CEG Spartanz Variety Club (2022–2024): Managed content, branding, and event promotions.

Courses & Certifications

- Artificial Intelligence (2025–present): Intelligent agents, search strategies, reasoning, and AI applications.

- Machine Learning (2024): Regression, classification, decision trees, CNNs, RNNs with Python labs.

- Face Recognition App – GUVI (2022): Built a real-time face recognition system using OpenCV.

- Python and Deep Learning – ShapeAI (2021): Practical neural network development and model training.

- Microsoft Excel Masterclass – Learnmall (2021): Advanced data analysis and visualization techniques.