Ananya Verma

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B.Tech - Computer Science and Engineering ananya-verma.com Github
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Education

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
B.Tech. (Computer Science)	RV University, Bangalore	9.36 (5th Sem)	2022-Present
Senior Secondary	CBSE Board	86 %	2022
Secondary	CBSE Board	92 %	2020

Projects

- **Text-To-CAD Generator** *Link*
  Tech Stack: React.js, Three.js, FastAPI, Google Gemini, OpenSCAD, Docker, TypeScript Github Link
  – Built a full-stack Text-to-CAD system using FastAPI, React, and Gemini flash 1.5, enabling users to generate 3D CAD models from natural language prompts with 85% script validity rate.
  – Integrated .CATPart–.STL conversion with Three.js rendering, cutting preview time to under 10 seconds
  – Engineered prompt templates and validation logic, boosting CAD code accuracy and cutting manual fixes by 40%.
- **ACRS – Autonomous Cyber Reasoning System** ***Cyber-Sanctum 2025***
  Tech Stack: Python, FastAPI, AST, Regex, LinearSVC, TF-IDF, Docker Link
  – Built an autonomous agent to detect and auto-patch Broken Access Control vulnerabilities in web applications.
  – Implemented hybrid detection using LinearSVC + TF-IDF n-grams with rule-based vulnerability signatures.
  – Safely rewrote 47+ vulnerable code paths using AST-based code transformation.
- **Moody – Mood Journaling Web App** *Link*
  Tech Stack: MongoDB, Express.js, React, Node.js, TailwindCSS, Vercel, Render Github Link
  – Engineered a full-stack journaling platform using the MERN stack to enable users to log and visualize daily mood patterns.
  – Designed and implemented secure RESTful APIs with Node.js and Express.js, integrating with MongoDB for scalable data storage.
  – Developed a responsive React frontend with TailwindCSS, enhancing usability across devices with a clean and accessible UI.

Skills

- **Programming**: Python, C/C++, Java
- **Technical**: Cloud Computing, Docker and Kubernetes, OpenCV, NLP, Neural Networks - CNNs, Cybersecurity (Basic), Git, Github, Git Actions, CI/CD, UiPath (RPA), IoT basics, Networking, Agentic AI (Prompt-to-Action Systems, Autonomous LLM Workflows)
- **Operating Systems**: Windows, Linux (Ubuntu)

Key courses taken (as of 1st January 2025)

- **Mathematics**: Linear Algebra, Discrete Maths, Probability & Random Processes, Calculus for Computer Science
- **Programming**: Fundamentals in C, DBMS, Data Structures and Algorithms, Object-Oriented Programming in Java, Theory of Computation, Design Analysis of Algorithms
- **Other (University) Courses**: Operating Systems and System Software, Data Analysis in Python, Computer Networks, Intro to Cloud Computing, Web App Security, Introduction to Web Development
- **NPTEL Courses**: Big Data Computing (Top 1 percent) - **Certificate**, Google Cloud Computing (Top 5 percent) - **Certificate**
- **Python Bootcamp (Udemy), Python-Based Image Processing (Udemy), C for Beginners (Udemy), AI Skills Challenge (Microsoft)**:

Experience

- **AI/ML Intern**, Dassault Systèmes *June. 2025-July 2025*
  CERTIFICATE
  – Built interactive BI dashboards in Netvibes using a custom MediData dataset with 500+ synthetic records.
  – Prototyped 15+ CAD models by converting natural language prompts into CATIA files using Gemini LLM.
  – Reduced design iteration time by 35% through AI-driven prompt-to-CAD automation.
- **ML Intern**, Visist AI, Bangalore *June 2024 - July 2024*
  CERTIFICATE
  – Trained models using toolboxes like mmpose and mmdet for badminton pose estimation and shuttle tracking
  – Annotated videos and helped building the datasets for training