

Ananya Ghosh

Pre-final year, Integrated 5yr MTech (Computer Science & Engineering)
Vellore Institute of Technology, Vellore (NIRF rank 11th 2023)

**Full stack Software Developer, AI - ML, Deep learning, Data Science,
Federated Learning, NLP, Computer Vision**

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FIND MY PROFILE



Passport: Valid up to 2029



PROFILE SUMMARY

I am a 4th year student pursuing Integrated MTech (CSE) at Vellore Institute of Technology (VIT), Vellore (NIRF rank 11th 2023). I have worked on **15 projects** on different technical domains including Full Stack Web Development, Artificial Intelligence (AI), Machine Learning (ML), Deep Learning (DL), Natural Language Processing (NLP) and Data Analysis etc, using Python, C and C++. I have worked on **7 domain internships** at DRDO, SocialWell, Goldman Sachs and LetsGrowMore etc. I have engaged myself in **10 research works** on different technical domains including AI, ML, DL, NLP etc, out of which one paper is published, 4 papers are under review by publication houses and rest of the research works are in progress. Along with my own domain knowledge, I have a fair understanding of Environment, Sustainability, Net Zero, Carbon Footprint etc.

EDUCATION



Vellore Institute of Technology, Vellore, India, (NIRF rank 11th)
Integrated **M Tech in Computer Science & Engineering**
(CSE), 2020-2025, 4th year Student



Delhi Public School, Ruby Park, Kolkata, India
AISCE CBSE (10+2) PCMB, 2018-2020, **94%**



G.D. Birla Centre for Education, Kolkata, India
ICSE (10th), 2006-2018, **96%**

RESEARCH WORK

- Research 1: Alzheimer's Disease Prediction using AxCoSa Multi-Deep Neural Network Architecture - (Under review for publication)
- Research 2: Federated Average Distillation Conditional Mutual Learning in Waste Management- (Under review for publication)
- Research 3: Bioinspired Soft computing algorithms comparative study- (Under review for publication)
- Research 4: Artificial Intelligence in Bringing about a Revolution in the Healthcare Industry (Published)- [Link](#)
- Research 5: Federated Average Evolutionary Stochastic Gradient Learning in Marine Plastic Pollution Management-(Under review for publication)
- Research 6: Explainable AI Ensembled Transfer Learning for diagnosis and prediction of progress of Alzheimer's Disease from MRI Scans-(Ongoing)
- Research 7: Blockchain-Based Carbon Reduction Challenge - (Ongoing)
- Research 8: Synergizing IoT and Drone Solutions for Advanced Surveillance and Integrated Health Monitoring-(Ongoing)
- Research 9: Chronic-Kidney-Tumor-Detection-using-ML-DL - (Ongoing)
- Research 10: Hyper-Parameter-Tuned-Ensembled-Genetic-Algorithm-Optimized-Model-PCOS-Prediction - (Ongoing)

PUBLICATIONS

Technical Research Papers

Artificial Intelligence In Bringing A Revolution In The Healthcare Industry- (E-ISSN: 2456-5571) Jan 15, 2021 BODHI International Journal of Research, Research & Publication Services (CRRPS), India - [Link](#)

Technical Blogs

- Artificial Intelligence in Healthcare- [Link](#)
- Future & Scope of IoT- [Link](#)

NOTABLE ACHIEVEMENTS

- ★ Two **Merit Certificates** (Top 3 students in the class), awarded for the year 2020-21 & 2021-22 at VIT.
- ★ '**Achiever Certificate**' awarded by VIT in 2021-22, for Outstanding Performance at National level Competitions.
- ★ **Microsoft Learn Student Ambassador (Beta)** appointed by Microsoft and **IBM Z Ambassador** appointed by IBM
- ★ **10+ Tutorials Delivered** for Students of various universities/ engineering colleges (including peers and seniors)
- ★ Won several **Hackathons** at National & international events
- ★ **Technical Head** in Board of IEEE Women in Engineering, VIT.
- ★ **Scholar Badge** by DPS Ruby Park School for Outstanding Academic Performance in 12th board CBSE examination.

KEY SKILLS

- **Full Stack Web Software Development**
UI/UX (Figma, Adobe PS, Canva), Frontend (HTML, CSS, Angular, JavaScript, Tailwind), Backend (Django, Flask, NodeJS), Database (SQL), ODK, ETL, Software Development, Project Principles and Life Cycle.
- **Artificial Intelligence**
Machine Learning, Federated Learning, Transfer Learning, Deep Learning, Neural Network, Natural Language Processing, Computer Vision, Data Science, Explainable AI (XAI)
- **Coding Languages** - Python, C/C++, Java
- **Internet of Things**- IoT APIs, Arduino, Drone, RaspberryPi, Sensors, MIT App Inventor
- **Blockchain** - Ethereum, Solidity
- **Augmented Reality**- Unity3D, C#, Vuforia

INTERNSHIP EXPERIENCE



Defence Research and Development Organisation (DRDO)
Software Development and Quality Intern (May 2023-Present)



Microsoft
Microsoft Learn Student Ambassador (October 2021-Present)



IBM
IBM Z Ambassador (September 2021-2023)



Goldman Sachs
FinTech Virtual Experience Program (December 2022)



Social Well (IT Company in Agri)
AI & ML Intern, December 2022 - March 2023



GirlScript WoC (Open Source Contributor)
(Python Backend Dev, Open Source, ML) August 2021-December 2021



LetsGrowMore
Web Development Intern (une 2021-July 2021)

POSITIONS OF RESPONSIBILITY



IEEE Women In Engineering, VIT
Technical Head, Jan 2021-Present



IEEE Signal Processing Society, VIT
Senior Core Committee Member Jan 2021-Present



IEEE Professional Communication Society, VIT
Technical Mentor, May 2021-Present



Institution for Engineering and Technology, VIT
Core Committee Member, Dec 2020-Present

ACADEMIC COURSES AND SKILLS COMPLETED

- Operating System Principles and Linux
- Software Engineering Principles
- Application Development and Deployment Architecture
- Cloud Computing Technologies
- Digital logic and Computer Design
- Data Structures and Advanced Algorithm Analysis
- Database Management Systems
- Principles of Compiler Design
- Data Communication and Networks TCP/IP
- Programming in Java
- Front End Design and Testing, Server-Side Programming
- Microprocessor Interfacing
- Applied Cryptography and Network Security, Cyber Security
- Artificial Intelligence and Expert Systems
- Advanced Python/ C Programming
- Deep Learning, Machine Learning, Soft Computing
- Natural Language Processing and Computational Linguistics
- Internet of Everything
- Blockchain Technologies

MY PROJECTS

- LifeAI- Multiple Disease Predictor Software**
Predicts Alzheimer's Dementia Prediction- 2D CNN for Dementia Architecture, Breast Cancer Prediction- Hyperparameter Tuning and Genetic Algorithm, Heart Disease Prediction- Ensemble Learning with Ant Colony Optimization, Diabetes Prediction- Supervised Learning with Crow Search Optimization, Parkinson's Disease Prediction- Voice data based Support Vector Machine Algorithm, Lung Cancer prediction using XGBoost
<https://github.com/A-GHOSH-dev/LifeAI-Multiple-Disease-Prediction-ML-AI-Software>
- Patient Condition Prediction and Drug Recommendation** using Flask, NLP, ML classification, Speech to text and sentiment analysis features
<https://github.com/A-GHOSH-dev/Patient-s-Condition-Classification-and-Drugs-Recommendation-NLP-Flask-Web-App>
- Industrial Incident Reporting, Investigation & Management Software**- Full Stack Web Software Development
<https://github.com/A-GHOSH-dev/DBMS-Project>
- ESG Software (Environmental, Social, Governance)** - Full Stack Web Software Development
<https://github.com/A-GHOSH-dev/ESG-Software>
- Tuition Management System** - Full Stack Web Software Development
<https://github.com/A-GHOSH-dev/Tuition-Management-Software>
- EduVision - AR based Education** for All while connecting all stakeholders of Education Augmented Reality & Web Development
<https://youtu.be/43FutdjrHhE>
- KrishiSahayak**- Full stack Web Application to connect all the stakeholders of the Agriculture system in India – The Farmers, The Consumers, The Corporates / Food Consultant / NGO
<https://www.youtube.com/watch?v=mkJ4upvsbBM&t=52s>
- Donation and Vaccine**- Web Application and chatbot for organ, plasma and blood donation and COVID-19 vaccine program registration
<https://youtu.be/orM0XbbdUcl>
- Fake Job Detection** using NLP and Machine learning
<https://github.com/A-GHOSH-dev/FakeJobDetection-BCD>
- Sentiment Analysis of Twitter** using NLP and Machine learning
<https://github.com/A-GHOSH-dev/ML-and-NLP-based-Sentiment-Analysis-of-Twitter>
- Real Time Web Chat Application** using Node Js & Socket.io
<https://github.com/A-GHOSH-dev/Node-Js-101-with-VS-Code-Azure-Devops-MLSA-Webinar-2>
- HackX Website**- The Hackathon website for IEEE SPS VIT Hackathon
<https://www.spsvithackx.com/>
- Game Database Website** using AngularJs and a public API
<https://github.com/A-GHOSH-dev/Game-database-Website-using-Angular-and-Public-API>
- ToDo App** using AngularJs and Azure Services
<https://github.com/A-GHOSH-dev/Angular-Js-101-with-VS-Code-Azure-MLSA-Webinar-1>
- Handwritten Text Recognition, Face recognition** using OpenCV and pytesseract
<https://github.com/A-GHOSH-dev/Handwritten-text-image-text-extraction>

TUTORIALS DELIVERED

10+ Tutorials Delivered in Online/Offline mode for Students of various universities and engineering colleges (including peers and seniors), on various topics on Node Js, AngularJs, Azure, Full Stack Web Development, Django Backend, Data Structures, Space Science, Arduino and IOT.

- Microsoft Learn Student Ambassador
Webinars- <https://www.youtube.com/playlist?list=PLTCQHJ6a3vUbEqO5GTKEduof2wol0C9W>
- Django - <https://www.youtube.com/watch?v=kTbDRUzC6l&t=69s>
- Complete Web Development Roadmap- <https://www.youtube.com/watch?v=iBvhv5Z5yBo&t=135s>
- Arduino session- <https://www.youtube.com/watch?v=umaSn3Exfi0>
- Arrays || Data Structures- https://www.youtube.com/watch?v=pjFjnOi74GA&list=P_Ltp4G3l0nml4vZl_ljllkh9QtHxbTbaWB&index=2
- SEDS VIT Outreach Session || Basics of Space and Astronomy- <https://www.youtube.com/watch?v=bFf8FsMBEow&t=25s>

EXTRACURRICULAR ACTIVITIES



Students for the Exploration and Development of Space, VIT
Core Committee Member, Jan 2021-Present



Team UAV, VIT
Core Committee Member, Jan 2021-Mar 2021



Energy & Environment Protection Club, VIT
Core Committee Member, Jan 2021-April 2021



International Model United Nations
Official Campus Ambassador (June 2021-January 2022)

HACKATHONS

- ✳ HackOff v3.0 IET VIT
- ✳ HackVerse 2.0 NIT Suratkal
- ✳ SheHacks'21, IIIT Allahabad
- ✳ Women Techies'21 DSC VIT
- ✳ HackNITR 2.0 NIT Rourkela
- ✳ MozoHack 2.1 SRM KZILLA
- ✳ HackTriX IEEE SRM
- ✳ BU Hack Bennett University
- ✳ BitBox DSC JIIT
- ✳ KJSCE Hack 5.0 Code Cell
- ✳ iHack ISA VIT
- ✳ Tempora IEEE SPS VIT
- ✳ HULT PRIZE CHAMPIONSHIP 2021 On- Campus

CULTURAL

Won several awards at School & college and various state level competitions –

- ✳ Singing (Indian Classical & Contemporary)
- ✳ Dancing (Kathak & Indian Contemporary)
- ✳ Painting
- ✳ Recitation

COUNTRIES VISITED

France, Italy, Switzerland, Hong Kong, Egypt, Dubai, Thailand, Sri Lanka, Maldives

CODING & RESEARCH PROFILES

ResearchGate:- <https://www.researchgate.net/profile/Ananya-Ghosh-11>

GitHub- <https://github.com/A-GHOSH-dev>

Hackerrank- https://www.hackerrank.com/ananya_ghosh2020?hr_r=1

Leetcode- <https://leetcode.com/AnanyaGhosh/>