# Biresh Biswas

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#### **EDUCATION**

#### Vellore Institute of Technology - Chennai

Chennai, India

Bachelor of Technology in Computer Science and Engineering — CGPA: 8.31/10.00

Aug 2023 - 2027

# Kendriya Vidyalaya Ambernath

Ambernath, India

Higher Secondary Education | Class XII: 90.8%, X: 93%

2011 - 2023

# EXPERIENCE

### Samsung PRISM — Research Intern

Sep 2025 – Present

SplitLoRA, PyTorch, Hugging Face, Python

- Developing SplitLoRA framework for distributed fine-tuning across resource constrained devices
- Implementing layer wise model splitting and LoRA adapter allocation for coordinated training
- Evaluating scalability, efficiency, and accuracy across CPU-GPU-multi-device setups

## Quetzalcoatl Pvt Ltd — Full Stack Developer

Mar 2025 – Present

Docker, Node.js, PrusaSlicer CLI, Python, GCP

- Built containerized 3D printing pipeline reducing Docker image size from 10GB to 1GB through multi-stage builds
- Developed dynamic pricing engine using Python G-code parsing for real-time quote calculations
- Implemented parallel processing with ThreadPoolExecutor for concurrent user request handling

#### L&T Energy Hydrocarbon — IT Intern

June 2025

ASP.NET Core, SQL Server, QuestPDF, Azure AI

- Built FlowDocs enterprise tool reducing manual effort by 60% and review cycles by 45%
- Implemented role-based workflow with semantic versioning and audit trails
- Designed normalized SQL Server database with Entity Framework Core for compliance

#### OPEN SOURCE CONTRIBUTIONS

## Open Library — Contributor

PRs ^

Python, JavaScript, Jest, APIs

- Developed OpenAlex CLI \(^{\text{T}}\) importing 15K+ books with comprehensive data validation
- Fixed critical "Want to Read" bug with JavaScript/Jest testing and maintained weekly contributor calls

#### Formstr (Bitcoin/Nostr) — Contributor

 $\underline{PRs} \nearrow$ 

JavaScript, Nostr Protocol, WebLN, Bitcoin Lightning

- Implemented NIP-05/NIP-50 support with unified search and Bitcoin Lightning "zap" payment integration
- Built Jest testing framework with Docker-based local Nostr relay for integration tests

#### PROJECTS

Outreach | FastAPI, Next.js, Crawl4AI, GenAI, AWS (EC2, RDS, S3, CloudFront, SES)

GitHub -

- Developed an AI-powered connection service that transforms natural language goals into lead discovery/outreach
- Built LLM-driven query expansion with Crawl4AI for geo-targeted crawling, contact extraction and summarization
- Implemented semantic search, predictive lead scoring with ML, and deployed a scalable AWS architecture

#### ACHIEVEMENTS

- 1st Runner-Up, I Love Hackathon: Chennai Web3 (2/49 finalists, 900+ applicants)
- Top 15 in DevHouse 2024 (15/64 finalists, 1000+ applicants, by GDSC VIT-Chennai)
- Hacktoberfest 2024 with contributions to Ansible, spotDL, and other popular repositories

#### TECHNICAL SKILLS

Languages: Python, JavaScript, TypeScript, C/C++, C#, HTML/CSS

Frameworks: React, Next.js, Node.js, FastAPI, ASP.NET Core, Express, Flask Tools/DB: PostgreSQL, MongoDB, SQL Server, Docker, Git, Linux, GraphQL

Cloud/AI: GCP, Azure AI, AWS, LangChain, Groq, WebLN, Nostr Protocol, Bitcoin Lightning