

# Mayank

Bengaluru, India | +91 8050119354 | mayankiitg35@gmail.com | LinkedIn | Github

## EDUCATION

### Indian Institute of Technology Guwahati (IITG)

Bachelor of Technology, Electronics and Electrical Engineering

October 2022 - June 2026

CGPA- 7.3/10

## SKILLS

- **Programming Languages:** C++, C, Python, JavaScript
- **Web Development:** HTML, CSS, Node.js, React, Next.js, TypeScript
- **Databases:** MySQL, PostgreSQL, MongoDB
- **Tools/Techologies:** Git, RESTful Web Services, Docker, Redis
- **Core Concepts:** Data Structures and Algorithms, Object-Oriented Programming (OOP), Database Management System, Operating System, Computer Networks

## EXPERIENCE

### Machine Learning & Computer Vision Intern

Dr Anirban Dasgupta, Dept of EEE, IIT Guwahati

May 2025 – Jun 2025

Guwahati, Assam

- Developed a facial-expression classification system (stressed, depressed, normal) on a curated **6K-image dataset** and set performance baselines using classical machine learning models (SVM/LDA/KNN), peaking at 64% (SVM)
- Architected and trained a deep VGGNet-style **Convolutional Neural Network(CNN)** in **PyTorch**, achieving **75%** accuracy (+11 pp over baseline) via GPU acceleration and advanced regularization
- Implemented **Generative Adversarial Network(GAN)** and employed transfer learning with a pre-trained **EfficientNetB3** model that improved minority-class recall by over 15% and reduced overfitting while maintaining overall accuracy

## PROJECTS

### SecretShare | Github

- Engineered a full-stack, zero-knowledge secret-sharing platform with **Next.js** & **Node.js**, featuring **one-time-access links**, **AES-256 encryption**, **password protection (bcrypt)** and auto-expiry, reducing leakage risks by 100%
- Architected a scalable **RESTful API** with Express.js, utilizing **PostgreSQL** for robust data persistence and implementing a **Redis** caching layer to optimize for high-concurrency and minimize database latency
- Established a full-stack **DevOps CI/CD** pipeline by containerizing the Next.js frontend and Node.js backend with **Docker**, enabling automated, zero-downtime deployments to Vercel and Railway respectively

### TestPilot - Unit Test Generator | Github

- Built a full-stack, AI-powered unit testing sandbox using **Next.js 15**, **React 19**, leveraging the **Groq API** to auto-generate unit tests (JS/Python/C++/Java) with configurable strategies cutting manual test writing effort by over **70%**
- Engineered a **GitHub App** using **Octokit** to scan pull requests, identify changed files, and post test suggestions via **webhooks** with HMAC validation, streamlining review workflows with automated feedback
- Established a full CI/CD pipeline with **GitHub Actions** for automated builds and containerized the application with **Docker**

### Airline Management App | Github

- Developed a full-stack **Airline Management System** using **React**, **Node.js**, **Express**, and **MongoDB**, enabling users to **search**, **book**, and **review** flights with real-time data integration
- Implemented secure **user authentication** and profile management with **Google OAuth 2.0** via **Firebase**
- Designed and implemented robust **CRUD operations** for flights, bookings, users, and reviews using **RESTful APIs**

## ACHIEVEMENTS

- **JEE Advanced 2022**, Secured All India Rank **2379** among 0.15 million students
- **JEE Main 2022**, Secured All India Rank **4346** among 0.9 million students
- **Rank 65 among 3000+ participants**, Codechef STARTERS 196C
- **Rank 624 among 31000+ participants**, LeetCode Weekly Contest 465
- **Rated Knight**, Max Rating 1865 on LeetCode
- **Rated Specialist**, Max Rating 1485 on Codeforces
- **KVPY**, Qualified KVPY Aptitude Test and was interviewed at IISc, Bengaluru
- **NTSE**, Qualified NTSE Stage - I

## SCHOLARSHIPS

- **Reliance Foundation Scholar**, Awarded scholarship of Rs 2 lakhs by the Reliance Foundation