VEDANT LALIT BHATT

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EDUCATION

Georgia Institute of Technology **Atlanta, GA**

B.S. in Computer Science | GPA: 3.8 — Expected Graduation: May 2027 *August 2024 – Present*

- **Concentrations**: Intelligence and Information Networks
- **Relevant Coursework**: Introduction to AI, Computer Systems and Networks, Design and Analysis of Algorithms, Data Structures and Algorithms, Database Systems, Discrete Mathematics, Objects and Design, Linear Algebra
- **Scholarships & Awards**: Zell Miller Scholarship, Georgia Certificate of Merit, IT Specialist Certiport Software Development

EXPERIENCE

BrainLab Research Group **Atlanta, GA**

Undergraduate ML Researcher *September 2025 – Present*

- Built Python brain EEG data pipelines with live Kafka streaming and modular steps handling decoding and preprocessing
- Worked with time series models to classify brain waves and SSVEP activity, achieving 89% accuracy via cross-validation
- Applied adaptive noise cancellation to remove power line interference, improving signal fidelity via 28% noise reduction

Quilly **Atlanta, GA**

Software Engineer Intern *August 2025 – Present*

- Migrated backend from Firebase to Supabase with PostgreSQL, achieving 75% faster read times and 60% faster write queries
- Optimized platform performance by improving Redis cache hit rate by 40%, reducing data fetch latency and server load
- Developed responsive React website with Tailwind CSS featuring interactive navbars, modal dialogs, data tables, and forms

King of the Curve **Atlanta, GA**

Full Stack Developer Intern *May 2025 – August 2025*

- Refactored Flutter components using Riverpod for state management, iterating features collaboratively through Agile sprints
- Optimized cross-platform app load times by 30% through image compression, lazy loading, and asynchronous data fetching
- Worked with Figma designs to create interactive flashcards, quizzes, and progress tracking features used by 100,000+ users

Big Data Big Impact - FishCast **Atlanta, GA**

Data Engineer *February 2025 – Present*

- Built ETL pipelines processing NOAA and Fishbase data using Python, enabling predictive modeling of marine movement
- Trained LSTM models on habitat data, achieving 87% accuracy with 5-fold cross-validation to forecast Atlantic Cod shifts
- Designed GIS dashboards on AWS EC2 using Lambda for preprocessing, applying event-driven architecture for insights

Alpha Kappa Psi (Professional Fraternity) **Atlanta, GA**

Director of Software Development *January 2025 – Present*

- Developed a React website used by the fraternity of 200+ members, streamlining the tracking of members & performance
- Implemented WebSockets for real-time group discussions and forums, enhancing collaboration among fraternity members
- Utilized Firebase, Axios, Swagger, reducing API response time 25% by identifying bottlenecks via profiling and load tests

PROJECTS

EEG Emotion Classification — Python | TensorFlow | NumPy | SciPy | MATLAB | Git October 2025

- Developed a pipeline extracting delta, theta, alpha, beta, and gamma band features from multichannel EEG signals using FFT
- Trained a shallow neural network on normalized band power features, achieving 81% accuracy in emotion classification
- Applied artifact rejection for noise and two-second epoch segmentation for cleaned signals, improving model analysis

FileAI — TypeScript | Python | OpenAI CLIP | HuggingFace | FAISS | CedarOS | NumPy | GraphQL | Git September 2025

- Built an interactive natural language chatbot enabling users to execute file actions: create, move, organize, zip, and search
- Implemented semantic file parsing, mapping file contents to vector embeddings for efficient representation and retrieval
- Accelerated query times 75% by caching and retrieving previously calculated vector embeddings with FAISS Library

MySQL - Runner — TypeScript | Node.js | Python | Flask API | MySQL | Ollama | Git August 2025

- Developed a VS Code extension integrating Ollama's Llama3.2 NLP model to convert natural language queries into SQL
- Increased output accuracy by 30% using schema-aware prompts to ensure valid table and column names in generated queries
- Built to boost productivity by seamlessly integrating multiple tools, reducing context switching and saving navigation time

SKILLS

Languages: Java | HTML | CSS | Python | Assembly | Swift | SwiftUI | C# | C | C++ | PostgreSQL | JavaScript | TypeScript
Software: Xcode | Git | MySQL Workbench | Jira | Axios | Visual Studio Code | PyCharm | IntelliJ IDEA | Terminal/Bash
Frameworks/Platforms: Node.js | React.js | Hugging Face | Linux | Pandas | Flask | REST | AWS | GraphQL | Docker | Kotlin