

# ABHAY DEEP SINGH

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## Education

### Georgia State University

Senior | Graduation: May 2026

- Presidential Scholar:** Full scholarship offered only to the top 10 Student at GSU.
- Honors College:** Exclusive experience for highly talented students.
- President's List:** 4.0 GPA award.

### Academic Scores

College GPA: **4.0** • SAT: **1540** • AP Physics 1: **5** • AP Calculus AB: **5** • High School: **93%**

## Skills

### Programming Languages

- Python for AI/ML & Data Science:** Experienced in architecting agentic workflows, LLM orchestration, RAG pipelines, and vector embeddings for production-grade AI systems.
  - Relevant Technologies:** TensorFlow • Transformers • LlamaIndex • LangChain • Flask • Pandas • vLLM • PyTorch • Keras • Qdrant • Hugging Face • MCP ~
- HTML5/CSS/JavaScript:** Proficient in developing dynamic web applications with a knack of getting the full stack seamlessly integrated.
  - Relevant Technologies:** Node.JS • Express.JS • React JS • Next JS • MongoDB • SQL • Bootstrap • JQuery • Git • RESTful APIs • Bash • Docker • TypeScript ~
- iOS (Swift):** Proficient in developing advanced iOS applications that are responsive on all iOS devices.
  - Relevant Technologies:** Swift • Xcode • StoryBoard • ViewControllers • Objective-C ~
- AWS:** Proficient in developing, deploying, and automating cloud native applications using AWS.
  - Relevant Technologies:** S3 • DynamoDB • Lambda • EC2 • CloudFormation • Bedrock ~

## Achievements and Community

- IAYP** (International Award for Young people).
- Merit in National Science Olympiad (SOF).**
- Merit in Homi Bhabha** Science Olympiad.
- Fund raised for those in need of warm clothes. ([Fund Raiser Link](#))
- Teaching the blind** under the Team Vision.

## AI/ML & AWS Full Stack Engineer

### Relevant GSU Coursework

- Data Structures and Algorithms (CSC 2720)
- Software Engineering (CSC 4350)
- Mobile App Development (CSC 4360)
- Fundamentals of Data Science (CSC 4780)
- Honors: Artificial Intelligence (CSC 4810)
- Machine Learning (CSC 4850)

## Experience

### Software Development Engineer Intern

Amazon

(Seattle, WA. Summer 2025)

- Created JavaClient and Model auto generation for Amazon Payments APIs using OpenAPI swagger code generation.
- Saved over 6 days of developer effort per new API added to financial services. Automated unit testing of all future JavaClients and Models.
- Created a monitoring service to keep track of ongoing AWS server migration costs and progress per fleet in Amazon Payments adopted by over 100 L6/L7 managers who get access to custom emails and a web UI.
- Received letters of recommendation from both mentor (L5) and manager (L6).

**Notable skills used:** Java, OpenAPI, AWS, Python, Amazon Harmony, CI/CD

### Full Stack Web Developer

Pemdas Productions LLC

(Atlanta, GA. Fall 2023 - Fall 2025)

- Created the website for the startup company (Full Stack).
- Used React hooks, components with CRUD operations for the front end.
- Used PostgreSQL for the database storing user login & shop data.
- Analyzed store data with Scikit-Learn to find user trends.
- Successfully modified merch positioning on website through found trends to boost sales. Received letter of recommendation.
- Led the tech team to revitalize the base website over the span of 1 year.

**Notable skills used:** NodeJS, ReactJS, Pandas, Firebase, Scikit-learn, Postgres

### Undergraduate Researcher

Georgia State University

(Atlanta, GA. Fall 2022 - Present)

- Collaborated with Professor Ashwin Ashok and pioneered Quantum Computing research at Georgia State University.
- Created shared research documents studying Quantum Computing and learning IBM QISKit technology.
- Simulated positional encoding on a QISKit quantum computer to test Recurring Neural Networks.

**Notable skills used:** Python, QISKit, Transformers, TensorFlow, Keras

## Projects

### Social ArXiv – NextJS/TypeScript/Qdrant/TypeSense

(Fall 2024)

- Built an AI research portal using ArXiv API with an in-document RAG chatbot for real-time and multi-user paper Q&A.
- Architected a serverless backend using Next.js API Routes, Firebase Auth, Typesense (keyword search), and Qdrant (vector database).

### NestQuest – ReactJS/MongoDB/Python/OpenAI

HackGT WINNER! (Fall 2023)

- A dynamic lease transfer app for students that enables risk-free housing search supported by a smart AI assistant providing real-estate guidance.
- Uses ReactJS and Tailwind CSS for the front end to present a responsive UI along with MongoDB and Supabase for a scalable database.
- Fine tuned AI temperature, LOGIT bias, and Top\_P to ensure accurate and safe responses to highly critical real estate questions.
- Won prize in HackGT 2023.

## Certifications

(Georgia Tech, NYU, UCI)

- [The Arduino Platform and C Programming](#) • UCI
- [Computer Hardware and Operating Systems](#) • NYU
- [Data Science in Python](#)
- [Introduction to Electronics](#) • Georgia Tech
- [Intermediate Web Development](#) • Code Path
- [Artificial Intelligence with Python CS50AI](#) • Harvard