

# ABHINAV VINOD

(470) 812-9969 | avinod34@gatech.edu | linkedin.com/in/avinod34/ | github.com/Abhi2668 | Atlanta, GA

## EDUCATION

### Georgia Institute of Technology

Expected Graduation: December 2025

**B.S Computer Science** concentrations in Artificial Intelligence and Computer Media

GPA - 3.8

**M.S Computer Science** in Computing Systems

GPA - 3.7

**Relevant Coursework:** SDLC, Web Development, Advanced Algorithms, Advanced Operating Systems, Machine Learning, Embedded Systems, Data Visualization, Data Structures, Computer Vision, Internet Architecture, Data Analytics, Computer Networking, Computer Graphics, Video Game Development, App Development, Databases, Statistics & Probability.

## PROFESSIONAL EXPERIENCE

### Site Reliability Engineer Intern

May 2025 – Present

*Flock Safety*

Atlanta, GA

- Maintained **Grafana** dashboards and pipelines, improving system visibility and reducing incident detection time by **45%**.
- Streamlined CI/CD workflows using **Jenkins**, Terraform, and **GitHub Actions** boosting deployment success rate by **25%**.
- Integrated **Gemini** Code Assist with private **Gerrit** VPC to allow indexing for improved code development, by up to **50%**.

### Software Development Intern

June 2024 – August 2024

*Corpay, Inc*

Atlanta, GA

- Implemented a 3-container approach integrating **React.js** and **Adobe ColdFusion** enabling rapid transitional development.
- Engineered an integration of an **MS SQL** databases with **Docker** containers for a team of 200+ engineers enabling transition.
- Innovated an application using **Podman** to conduct service containerization reducing software developer startup time by 40%.

### Software Development Intern

May 2023 – August 2023

*Wabtec Corporation*

Atlanta, GA

- Developed a Calibration Module using **wxWidgets** that increased calibration efficiency by 100% for maintenance staff.
- Engineered **C++** frameworks that integrate with existing backends via **CMake**, streamlining maintenance operations by 30%.
- Designed a scalable solution for maintenance across 50+ locations and 23,000+ locomotives ensuring system integration.

### Graduate Teaching Assistant

August 2024 – Present

*Georgia Institute of Technology*

Atlanta, GA

- Assisted 170 students with visualization technologies and theory, emphasizing the use of **Tableau**, **Datawrapper**, and **D3.js**.
- Spearheaded 15 recitations, graded and organized 10+ assignments, projects, and activities for 25+ students using **Javascript**.
- Supported learning of **Javascript** to enhance understanding of visualization principles achieving a class total GPA of 3.45.

## PROJECTS

### Sign Catalog Browser | *React.js, C#, .NET*

- Developed a **React.js** web app containing dashboards for management and teams to streamline file organization backed by **C#**.
- Implemented bag-of-words approach for files with metadata extraction using **.NET**, enhancing search and navigation by 30%.
- Directed configuration using **Docker**, integrating **Azure** Active Directory login and enabling login security for 30 members.

### HellWeek | *Unity, C#, Unity 3D*

- Programmed over 30 unique scripts to enhance audio, spatial interactions, ragdoll mechanics, and chase cameras using **C#**.
- Crafted over 30 objects in **Unity3D**, strategically encoded to improve game feel while prolonging player entertainment.
- Conducted 10+ thorough playtesting sessions, improving the alpha by 25% through enhanced AI and environment in **Unity**.

### XCOUNTRY | *Python, XGBoost, LightGBM, Leaflet.js, Vue.js*

- Programmed a **Python** tool for collegiate cross-country race selection and performance prediction inside a Vue.js application.
- Processed 102,000 athletes and 8,500 races using **Postman** to process **API** calls to generate dataset to perform prediction on.
- Spearheaded development using **Nuxt.js**, **Leaflet** and **D3** displaying implemented collaborative filtering for recommendations.
- Enhanced prediction accuracy by incorporating runner ability metrics achieving a 94% variance explanation with **XGBoost**.

### SMART-PAD | *Python, ESP32, UWB, Nuxt.js, Vue.js, D3.js, Numpy*

- Developed a real-time localization and movement analysis system for volleyball players using 5 **ESP32** UWB sensors.
- Engineered a 4 layer **IoT** pipeline leveraging **WebSockets**, **Python**, and **NumPy** for trilateration and jerk calculations.
- Designed a frontend dashboard using **Javascript** frameworks achieving visualization of player motion metrics in 500ms.

## TECHNICAL SKILLS

**Programming Languages:** Python (Numpy, Pandas, TensorFlow, PyTorch), Java, C#, C++, Javascript, Typescript, SQL, HTML.

**Technologies:** Tableau, CI/CD, D3.js, MS SQL, React.js, Adobe ColdFusion, Podman, Docker, wxWidgets, Visual Studio, .NET, Azure, Node, Scikitlearn, Postman, REST API, Nuxt.js, Leaflet.js, Next.js, UNIX, Angular, JSON, Swift, MySQL, GCP

**Proficient Math Theory:** Statistics, Linear Algebra, Number Theory, Probability Theory, Graph Theory, Statistical Analysis

**Languages:** English(Proficient), French(Proficient), Malayalam(Proficient), Arabic(Beginner)