Vivek Jagadeesh

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Objective

I am seeking a fast paced, challenging internship in embedded systems that will make use of my experience working with a variety of programming languages and frameworks both individually, and in large agile teams.

Education

Worcester Polytechnic Institute (WPI), Worcester, MA   Graduation May 2026

Bachelor of Science in Computer Science, GPA: 3.96/4.0

Relevant Courses:

Software Engineering, Introduction to Artificial Intelligence, Algorithms, Object-Oriented Design Concepts, Database Systems, Tools and Techniques and Computer Network Security, Operating Systems, Systems Programming Concepts

Skills

Programming Languages: TypeScript, JavaScript, Python, Java, SQL (Oracle & PostgreSQL), HTML, CSS, C, C++
Software Frameworks: Node.js, Next.js, React.js, Express.js, GraphQL, Flask, Tailwind CSS, API Gateway
Databases: PostgreSQL, Oracle DBMS, MongoDB, SQLite, AWS RDS, AWS DynamoDB, AWS S3, Azure Cosmos DB
Development Tools: AWS, Azure, Vercel Cloud, GitHub, Docker, Linux, Oracle VirtualBox, Sourcegraph Cody
AI/ML tools: AWS Bedrock, OpenSearch Knowledge Bases, SciKit Learn, TensorFlow, RAG, Agent Flows
Applications: Agentic flows, RAG, Unit Testing, Version Control, Web Development, Cloud Computing, CI/CD

Work Experience

Student Assistant, *WPI Department of Computer Science, Worcester MA*   May 2024 – Present

- Served as an agile team coach and led 6 teams, each with 4 students, in building a full stack web application.
- Guided teams through the agile methodology by supervising daily scrum meetings and scrum retrospectives.
- Ran weekly demonstrations in which students demonstrated their application and use of the agile methodology.
- Led a recitation session in which students used Docker, AWS EC2 and RDS to deploy their flask applications.
- Provided feedback on 30 student projects each week to highlight areas of progress and potential improvement.

Software Engineering Intern, *Waters Corporation, Milford, MA*   June 2025 – Aug 2025

- Developed and deployed Retrieval Augmented Generation (RAG) chatbot to streamline order support.
- Implemented Nova Lite for response generation and AWS Bedrock to provide an Open Search knowledge base.
- Created 7 AWS Lambda functions to manage chat history, document retrieval, and dynamic response generation.
- Built a WebSocket layer for real-time interaction between the React Frontend and Lambda functions.
- Implemented an agent flow to allow customers to re-order previous orders directly from the chatbot.
- Developed a token verification function to authenticate users and safeguard order data from unauthorized access.
- Collaborated in Agile Ceremonies and delivered technical demonstrations to stakeholders across a global team.

Project Experience

MLB Classifier, *Personal Project*   July 2024 – Aug 2024

- Implemented using Next.js, TypeScript, React.js, Python, Flask, Sci-Kit learn, PostgreSQL, AWS EC2 and RDS.
- Trained a neural network to classify MLB pitches using advanced metrics and achieved 92% model accuracy.
- Utilized Python Flask to create RESTful APIs to connect the machine learning model to the React.js frontend.
- Built a CI/CD pipeline to automatically build Docker containers upon a push to the project GitHub repository.
- Hosted the application on AWS EC2 and RDS and configured a custom domain name with Cloudflare DNS.

TA Companion, *Personal Project*   May 2024 – July 2024

- Created using Next.js, TypeScript, React.js, TailwindCSS, GraphQL, MongoDB, Auth0 and Cloudflare DNS.
- Allows users to keep track of their tasks using a kanban board, log their hours, and track their degree progress.
- Developed 25 custom React components to create a reusable, unique, and consistent theme across the application.
- Utilized Apollo GraphQL schema to prevent unnecessary fetching and to take advantage of API result caching.
- Deployed the application's user interface using Vercel cloud and hosted the database using MongoDB Atlas.
- Created a CI/CD pipeline which linted, tested, and deployed code on a push to the repository production branch.

An application for Brigham and Women's Hospital, *CS 3733 – Software Engineering*   Mar 2024 – May 2024

- Developed using TypeScript, ReactJS, Prisma ORM, Express.JS, Auth0 and hosted using AWS EC2 and RDS.
- Served as an Assistant Lead Developer and made 127 contributions and 8500 additions to the team repository.
- Led scrum meetings, retrospectives, technology stack presentations, and two application demonstrations.
- Developed and expanded the PostgreSQL database schema, Express.js REST APIs, and graphical map editor.
- Integrated Auth0 security features including RBAC, auto account creation and deletion, and protected APIs.
- Created and implemented entity-relationship and UML use case diagrams at the beginning of each agile sprint.