

ABHINAV PILLAI

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Education

University of Oklahoma — Norman, OK

Aug 2022 - May 2026

Bachelor of Computer Science

- Relevant Courses: Software Engineering, Artificial Intelligence, Operating Systems, Computer Architecture, Data Structures and Algorithms, Database Management Systems, Data Networks, Capstone

Work Experience

University of Oklahoma

Sep 2025 – Present

Software Engineering Undergraduate Research Assistant

Norman, OK

- Mentored 40+ students in Software Studio by preparing learning programs and fostering professional connections
- Taught lectures on front-end design principles, end-to-end prototyping, system design, and iterative development.

Vast Vertex Media

Sep 2024 – Apr 2025

Full-stack Software Engineer Intern

Norman, OK

- Spearheaded development on a scalable full-stack mobile application using React Native/TypeScript, PostgreSQL, Azure, PowerBI and REST APIs to display educational media to users.
- Designed and built various responsive, user-friendly websites for clients using Next.js, Tailwind CSS, Figma, and REST APIs

University of Oklahoma

Aug 2023 – Dec 2024

Software Engineering Undergraduate Research Assistant

Norman, OK

- Developed a full-stack Next.js/TypeScript based platform, ONEngineering, that allowed for over 400+ active OU Graduate and Alumni Engineering students connect with university contacts and industry professionals
- Crafted various C++/Python programs that use Handshake RSS Feeds to tag students and alumni records into common groups for recommendations within ONEngineering, further accelerating deployment times by 50%

UFLIP

Mar 2023 – Nov 2023

Software Engineer Intern

Oklahoma City, OK

- Utilized CSS, SASS, Node.js, JS, HTML, and Figma to create an intuitive and scalable user experience
- Improved website startup times by 60% by replacing synchronous code with asynchronous functions and API calls

Projects

NPD: EMS Call Analysis Tool | [Source Code](#)

Next.js | TypeScript | Python/Flask | SQL/AWS

- Developed a full-stack web app that will allow dispatchers to get graded feedback on their calls using WhisperX, Pandas, and ollama models.
- Utilized Next.js for the user interface, Python/Flask for a RESTful API backend, and SQL/AWS for database

Route Runners | [Source Code](#) | [Blog](#)

Next.js | TypeScript | Python/Flask

- Led the development of a full-stack web application for first responders, utilizing NextJS and TypeScript for the frontend, and Python + Flask as the backend
- Implemented a CI/CD pipeline to convert drone footage into 3D models enabling WebAR-based augmented reality escape plans for first responders and citizens

Leadership

Hacklahoma | [Devpost](#)

2022 – 2026

* Winner for Best Use of AI in Education 2024

India Association of Oklahoma

2016 – Present

* C# Teacher at Beginner's Coding Bootcamp - 2019

Technical Skills

Languages: HTML5, CSS, JavaScript, Typescript, SQL, NOSQL, Python, Java, C++, C#

Developer Tools: Vercel, Postman, Power BI, Git/Github, Azure, npm, JSON, AWS EC2

Libraries/Frameworks: ReactJS, PostgreSQL, NextJS, NodeJS, .NET