

Atharva Waranashiwar

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Summary

Software Engineer with experience in web applications and data management at Persistent Systems. Currently pursuing a Master of Science in Information Systems. Led the development of a laboratory data directory web app, optimizing ORM interactions for efficient data handling. Focused on leveraging technical skills and innovative solutions to drive impactful software development.

Education

Master of Science, Information Systems – Northeastern University, Boston, MA

Expected - Dec 2025

Courses - Network Structures and Cloud Computing, Program Structures and Algorithms, Advanced Big Data Applications and Indexing Techniques

Bachelor of Engineering – Pune University, Pune, India

Jul 2021

Courses - Data Structures and Algorithms, Object Oriented Programming, System Programming and Operating Systems

Skills

- **Programming Languages:** Python, JavaScript (ES6+), Java
- **Frontend Technologies:** React.js, Angular, HTML5, CSS3, TypeScript, Responsive Web Design
- **Backend & API Development:** FastAPI, Node.js, Express.js, RESTful API Design, Microservices Architecture
- **Database Management:** PostgreSQL, MongoDB, SQLAlchemy, Data Modeling, Database Optimization
- **Cloud & DevOps:** AWS (EC2, VPC), Google Cloud Platform, Terraform (Infrastructure as Code), Docker, CI/CD (GitHub Actions)
- **Version Control & Development Tools:** Git, GitHub, Bitbucket, VS Code, Agile & Scrum Methodologies

Work Experience

Software Engineer - Persistent Systems, Pune, India

Aug 2021 - Sep 2023

- Spearheaded the design and development of a laboratory data directory **web application using Angular** for the frontend and FastAPI for the backend, significantly enhancing **data accessibility and user engagement** through an intuitive, interactive interface.
- Engineered **RESTful APIs with FastAPI** to manage real-time data retrieval and updates, facilitating efficient communication between the frontend and backend for seamless user experiences.
- Integrated **SQLAlchemy ORM** to streamline database interactions with **PostgreSQL**, effectively managing and processing **millions of data entities** while reducing code redundancy and improving data management efficiency.
- Optimized **ORM queries** and ensured scalability to handle **large-scale datasets**, enhancing application performance and improving data access speed, resulting in a smooth and responsive user interaction.

Intern - Automate Engineering, Pune, India

Dec 2020 - Mar 2021

- Designed an **RFID-based smart billing system** using **Python** and embedded systems, automating item scanning and billing processes, resulting in a **3-minute reduction in checkout time per transaction**
- Handled a **face mask detection model** using **machine learning algorithms** in **TensorFlow/Keras**, achieving **87% accuracy** by optimizing feature extraction and training techniques on a large image dataset
- Worked on a **sign language recognition system** leveraging **computer vision and neural networks** to detect hand gestures, enabling seamless communication for users and enhancing system accessibility
- Integrated hardware and software components, ensuring seamless data flow, improving real-time system performance across projects

Projects

Task and Finance Management

- **Responsive Expense Tracking Interface:** Developed a responsive, user-friendly web app using React and Tailwind CSS, enabling users to easily manage and track their income and expenses.
- **Data Visualization with Chart.js:** Integrated interactive, category-based doughnut charts for visual insights into spending patterns, allowing users to understand their financial health.
- **Real-Time Balance Calculation:** Implemented automated balance calculations that dynamically update based on new transactions, ensuring users always have an accurate overview of their finances.
- **Secure Authentication and Database:** Configured Firebase Authentication with Google Cloud OAuth 2.0 for seamless, secure user sign-ins, and utilized Firestore as a NoSQL database to store and manage transaction data in real-time.

AI Sports Coach Feedback System

Secured 2nd place at the One Percent Athlete Hackathon by 10th Innings Ventures.

- **AI-Powered Fitness Coaching:** Built an interactive chatbot utilizing the OpenAI API to provide personalized coaching and actionable feedback for athletes aiming to enhance their performance.
- **Performance Tracking Dashboard:** Designed a dynamic dashboard to display key performance metrics such as strength, speed, power, and jump scores, enabling data-driven progress tracking.
- **Social Connectivity:** Implemented a "Find Friends" feature to foster community engagement by connecting athletes with similar interests and goals.

Tech Stack: Next.js, React, Firebase, OpenAI API