

Tirthraj Mahajan

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Summary

A passionate software engineer who is driven by attention to detail & specializing in Full Stack Web Development. Dedicated to building robust, scalable systems. Actively seeking opportunities to contribute to organizational success and continuously learning and adapting to new technologies.

Skills

Core Competencies - JavaScript · Next JS · NodeJS · Express JS · Python · Flask · MySQL · PostgreSQL · Supabase · Firebase · CSS · Bootstrap/Tailwind/Shadcn · Git · GitHub · C++ · Java · JDBC · Docker · AWS

Fundamentals - Backend Development · Database [DBMS] · Data Structures and Algorithms · Object Oriented Programming [OOP] · Distributed Systems · Cybersecurity

Extras – Familiarity with REST APIs · GraphQL · gRPC · Web-Sockets · API Integration & Security · Postman · Software Deployment · Software Design

Projects & Publications

Scalp Smart

[S.E Project]

Tech: Flask, Firebase, SQL, JavaScript, HTML, CSS, Bootstrap

Achievement: Runner-up in PICT's Impetus and Concepts

A platform designed to predict baldness stages using AI and Computer Vision via images uploaded by users. It provides predictions indicating the various stages of baldness. **Responsible for designing & developing the backend, frontend and the database schema.** Can be found at: <http://scalpsmart.onrender.com/>

Local Shrinks

[Hackathon Project]

Tech: Next JS, Firebase, Tailwind CSS

Achievement: Runner-up at Techfiesta Hackathon (36 Hour hackathon)

A platform that provides easily accessible mental health support, including real-time counseling, stress management tools, and mood tracking. Developed a chatbot & a question-based algorithm for diagnosing depression and anxiety.

Responsible designing & developing the backend, frontend and the entire database schema. Can be found at:

<https://techfiesta-web.vercel.app/>

C++ Micro Web Framework

[Personal]

Tech: C++ and Network Programming (Winsock2)

Created a web framework (similar to ExpressJS) from scratch which supports all types of HTTP requests. Key features of this framework include fast routing via AVL Trees, rapid response rendering, middleware chaining and SQLite Database connectivity. Utilized Windows Socket API (Winsock2) for network communication.

DigiBank

[Personal]

Tech: Next JS, Node JS + Express JS, Supabase, Shadcn UI, Web Sockets

A banking platform for secure document upload & complaint management portal. Key features: Complaint Classification, Prioritization, Summarization & Ticket Status Monitoring. Utilized industry standard Cyber Security algorithms like RSA, AES and Scrypt. **Published research paper titled "Secure Encryption of Documents and Smart Complaint Management for Banking Applications."**

All Projects can be found at <https://tirthraj07.onrender.com/projects/>

Experience

Persistent Systems Mentorship Program

Jun 2024 – Aug 2024

Developed an internal tool for Persistent Systems which automates employee pre-onboarding process. Key features: BGV Document upload & hosts videos necessary for an new joining employee for post-onboarding processes. Additionally includes security groups for permission based access control.

PICT Inhouse Internship (Virtual Lab Assistant)

Feb 2024 – Apr 2024

Created a website that lets students visualize the lab practical easily and learn theory behind them

AWS Cloud Club PICT (Technical Team Member)

Apr 2024 - Present

Education

Pune Institute of Computer Technology (B.E Computer Engineering) CGPA : 9.5	2024-2026
S.P. College, Pune HSC Score: 92.83%	2022
SPM English School, Pune SSC Score: 92.60%	2020

Additional

- Pulzion (ACM Student Chapter's Event) Winner: Web N App, Hire Hustle, Dexterous
- Technical Writer on Medium: <https://medium.com/@tirthraj2004>
 - [Introduction to Microservice Architecture](#)
 - [Introduction to Database Clustering using PostgreSQL, Docker and Pgpool-II](#)
 - [Deploying a Node JS Application on EC2 Step by Step](#)
- Courses:
 - The Ultimate 2024 Full Stack Web Development Bootcamp : Udemy
 - Fundamentals in Cybersecurity : Harvard's CS50