

SHAUNAK MAHAJAN

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EDUCATION

University of Southern California Los Angeles, USA
Master of Science in Computer Science August 2024-Present

College of Engineering Pune Pune, Maharashtra
Bachelor of Technology in Computer Science August 2018-May 2022
CGPA: 9.28/10 (Rank: 8)

SKILLS

Tools and Languages: C, C++, Python, Shell Scripting, Embedded C, Java, C#, JavaScript
Technical Proficiency: Linux, MySQL, Machine Learning, Data Structures, .Net Core, Angular
Communication: English, Marathi (native speaker), Hindi

EXPERIENCE

Persistent Systems Pune, Maharashtra
Software Engineer June 2022-July 2024

- Enhanced the Chemical Management System for Wolters Kluwer by consolidating four new features leveraging the .NET Core-based NABASIC framework, ensuring advanced and compliant chemical tracking
- Accelerated a web application for Symphony SummitAI, utilizing .NET Core Web API and AngularJS to deliver a robust, scalable solution for IT service management. Additionally, Innovated an internal application for Persistent Systems to streamline hiring process, revamping efficiency by 50% and candidate experience by 25%

Robot Study Circle Pune, Maharashtra
Technical Member March 2019-June 2022

- Engineered an electronic system for the ROBOCON event using embedded C, covering programming, debugging, and system analysis. Designed and fabricated 4 PCBs for robots with Altium Designer and conducted simulations with Proteus to ensure optimal performance

FinIQ Consulting Pune, Maharashtra
Summer Intern June 2021-August 2021

- Introduced Two-Factor Authentication for the FinIQ WebApp, integrating seamlessly with the MySQL login database to retrieve and validate user credentials blocking 99.9% automatic attacks
- Achieved a robust C# service to deliver One-Time Passwords (OTPs) to over 1,000 registered emails and optimized client-side VB.NET functionality for OTP verification through session management, improving security and efficiency for more than 500 users

ACADEMIC PROJECTS

Public Health Monitoring System Pune, Maharashtra
Software Engineering Mini Project January 2021-May 2021

- Devised a web application featuring critical functionalities appointment bookings and automated reminders, can facilitate over 500 patient interactions monthly, improving patient engagement and operational workflow for healthcare providers
- Proposed and created a centralized database system to monitor real-time health status of citizens and resource availability, enhancing service delivery efficiency by leveraging a MERN stack and deploying a user-friendly interface for doctors and patients

Scheduling in xv6 Pune, Maharashtra
Operating System February 2021-April 2021

- Implemented priority, FCFS, lottery, and multi-level queue scheduling algorithms in xv6, performed in-depth comparative analysis on performance metrics average turnaround time and waiting time
- Created an automated test suite with 45 distinct scenarios for seamless algorithm testing and comparison, executable with a single make command

Implementation of DIFF-PATCH Command of Linux Pune, Maharashtra
Data Structure and Algorithms August 2019-December 2020

- Redesigned the DIFF-PATCH command using Myers' diff algorithm and longest common subsequence with Dynamic Programming (DP) to compare two text files efficiently and apply changes with minimal operations

Multithreaded HTTP Server

Pune, Maharashtra

Computer Networks

August 2020-October 2020

- Developed an HTTP server using Python socket programming, implementing GET, POST, HEAD, PUT, and DELETE methods, and handling various headers, cache, and cookies

Developing and testing of peripheral of JETSON NANO

Pune, Maharashtra

Electronics and Image Processing

September 2019-April 2020

- Utilized OpenCV for object detection and trained machine learning models with suitable datasets, while integrating the Jetson Nano with 5 microcontrollers (AVR and ARM) and

PUBLICATIONS AND PRESENTATIONS

Theft Detection: An Optimized Approach using cGAN and YOLO, Springer Publications, AIR-2022, May 6-7 2022

Theft Detection System using cGAN Approach, AIP journal, AMMLAC-2022, Mar 16-17, 2022

Development of a Robotic Arm Manipulator Mounted on a Self-Balancing Two-Wheeled Mobile Robot, ARMS 2021, December 2-3, 2021

ACHIEVEMENTS

Wolters Kluwer Code Games'24 Champion, Engineered an innovative plug-in results in a 25% increase in customer satisfaction ratings; implemented tool, is now used by more than 15 consultants

Persistent Systems TECHNOTHON'23 Winner, Recreated a Textile Management System reduced customer query response time by 40% at Persistent Systems

Judge's Special Award, with Team COEP at DD Robocon'20

MEMBERSHIPS

Accounting Head- Robot Study Circle, Pune

Volunteer and Coordinator- Design Portfolio Impressions, COEP, Pune

Volunteer- Design Portfolio - BHAU's E-Cell, COEP, Pune