

ARJUN SIVARAMAN

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EDUCATION

VIT University | Vellore, Tamil Nadu, India

Expected Graduation Jul 2024

Bachelor of Technology in Computer Science and Engineering

CGPA: 9.04/10

- **Relevant courses:** DSA, Database Management Systems, Operating Systems, Automata Theory, Software Engineering, Parallel & Distributed Computing, Internet & Web Technologies, Cyber & Information Security.

EXPERIENCE

Bajaj Finserv Health | Pune, Maharashtra, India

Oct 2023 – Present

Software Development Intern

- Developing and delivering features towards increasing doctor engagement on the BHFL Doctors web portal.
- Worked on migrating API calls on the client from legacy Redux actions to React Query which improved data fetching and cache performance as well as overall maintainability of the codebase.

Simon Fraser University | Burnaby, British Columbia, Canada

Jul 2023 – Sep 2023

Research Intern

- Designed a specialised data structure to store and retrieve chats efficiently from the database and reduce data redundancy and optimised the database queries for an AI chatbot-based e-learning portal, to improve its performance.
- Worked on designing the system architecture and developed the backend for the overall application, interfacing the client-side authentication, Replicate AI model, MongoDB database, client interface using APIs.

Samsung R&D Institute, India | Remote

Nov 2022 – Jul 2023

PRISM Research Intern

- Researched on techniques to automate and customise image search and collection in a web crawler and developed the Flask server linking all the processes of the application.
- Worked on query expansion by generating synonym sets using bigrams-based Word Sense Disambiguation and text correction in the user query under the SW Quality Assurance & Efficiency group.

DynamoFL | Remote

Jun 2022 – Sep 2022

Frontend Developer

- Developed the UI for the Federated Learning Management portal which was one of DynamoFL's MVP, following the atomic design pattern.
- Integrated the APIs from the backend SDKs with the frontend, migrating the newer code to TypeScript.

SKILLS

- **Computer Languages:** Java, C++, Python, PHP, SQL, HTML, CSS, JavaScript.
- **Technologies/Frameworks:** Node.js, Express, Flask, React.js, TypeScript, Next.js, Tailwind CSS, Chakra-UI, MySQL, Firebase, MongoDB.
- **Developer Tools:** Git, Android Studio, Docker, Postman, Anaconda, Azure Devops.
- **Soft Skills:** Communication, Organisational Leadership, Analytical Thinking, Teamwork, Problem Solving.

PROJECTS

Sportlight 🌐 | Python, NLTK, Multiprocessing

Feb 2023 – Apr 2023

- Spotlight is program to automatically generate highlights data feed from an input video file using natural language processing on its audio transcript and outputting the timestamps of the highlights present in the video.
- The performance of the program is further accelerated by parallelising its operations using the Python Multiprocessing Module, utilising the SIMD approach to parallelisation and mutex locking techniques.

Visara | Java, Android Studio, Python

Aug 2022

- Visara is an Android application used to measure body vitals such as SpO2, Heart rate, Respiratory rate, etc. to ease regular screening of these vitals while being at home.
- These vitals are calculated on-device using the built-in smartphone sensors such as the camera, flashlight, accelerometer, and microphone.

Create Any App | Node.js, NPM

Feb 2022 – Apr 2022

- A command line interface which provides you with a robust set of configurations to bootstrap new projects with a variety of frameworks and libraries to mix and match and choose from.
- The user can also save their most used configurations as presets and setup new projects with a single command.

LinkHub | Next.js, TailwindCSS, Node.js, MongoDB, TypeScript

Dec 2021 – Feb 2022

- A portal wherein all users can post links of resources which they have used and allowing everybody to rate them.
- With this, the resources are ranked based on the feedback by others who have tried and tested those, thus, to provide the learner only the best of the best.

RESEARCH AND PUBLICATIONS

- **A. Sivaraman** et al. (2024). A Parallel Approach to Generate Sports Highlights from Match Videos Using Artificial Intelligence. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal*. In-press
- M. Furniturewala, **A. Sivaraman**, A. Anand, T. Kannuchamy, & S. R. (2024). Measurement of Body Vitals using Photoplethysmography (PPG) and Smartphone Sensors. *2024 International Conference on Emerging Trends in Information Technology and Engineering (ic-ETITE)*, Vellore, India, 2024. Accepted
- **A. Sivaraman**, M. Furniturewala, & G. P. (2023). Detecting and Fixing SQL Injection and Cross-Site Scripting Vulnerabilities in Web Applications. *2023 Innovations in Power and Advanced Computing Technologies (i-PACT)*, Kuala Lumpur, Malaysia, 2023.
- N. Madhani, E. Shah, S. P, **A. Sivaraman**, & M. Furniturewala. (2022). Digital Learning Trends Post Covid-19. *2022 Second International Conference on Advanced Technologies in Intelligent Control, Environment, Computing & Communication Engineering (ICATIECE)*, Bangalore, India, 2022.

ACHIEVEMENTS

- **Certificate of Excellence** by Samsung R&D Institute, India for outstanding performance during the PRISM Internship.
- **Third Place** at TRI-NIT Hackathon 2023 by ACM-NITK, CSEA-NITW and Spider-NITT for project **Clusterbase**.
- **Winners** at Smart India Hackathon 2022 by Ministry of Education for project **Visara**.
- **Experion Sponsor Track Winner** at Devspace 2022 by CSI-VIT for project **Sportlight**.
- **Winners** at HacksOverflow 2021 by IEEE-MUJ and ACM-MUJ for project **Envision Buddy**.
- **EchoAR Industry Challenge Winner** at Hackulus 2021 by SIAM-VIT for project **Envision Buddy**.

LEADERSHIP AND EXTRACURRICULAR

IET-VIT | Vellore, Tamil Nadu, India

Jan 2022 – Dec 2022

Head of Projects, App Development Lead

- Mentored junior app developers and managed the project workflows and lead the technical team consisting of 50+ students.
- Developed an Android app to help students plan and build their timetable and select courses after each semester which has crossed more than 1000 downloads on the Play Store.
- A speaker at seminars on interdisciplinary technical aspects, and organised events happening under IET-VIT.

VinnovateIT | Vellore, Tamil Nadu, India

Dec 2021 – Dec 2022

Web Developer

- An active part of the web development team as a developer and mentor, focused on building applications which ease different aspects of the day-to-day activities of students in the university.
- Developed a cross-platform app using React Native, for university students to view and help them remind when their favourites are up on the mess menu, which has crossed over 10,000 downloads on the Play Store.