Shambhuraj Wadghule

📍 Indianapolis, IN   ✉ srajw818@gmail.com   📞 +1 (463) 710 0365   ⊙ github.com/Shambhuraj43

in www.linkedin.com/in/shambhuraj/

Education

BS in Computer Science (Honors), Minor: Mathematics and Statistics, GPA: 3.69   Expected Graduation, December 2022
Purdue School of Science, IUPUI ⊡

Dean's List, Scholar's List
Recipient of Highly Prestigious Chancellor's Scholarship, Recipient of Mentoring Scholarship by Department of Mathematics, IUPUI.
Relevant Coursework: Data Structures and Algorithms, AI, Database Systems, Operating Systems, Software Design, Advance Calculus, and Differential Equations, Cloud Computing, Data Science, Theory of Computation, Compilers Design, Algorithms, Parallel Computing, Computer Networking

Professional Experience

Undergraduate Research Assistant   2019/06 – Present | Indianapolis, Indiana
Institute for Engaged learning, IUPUI ⊡

- Led a training and tutorial team of 5 people in the development of three Virtual Reality Modules for the Additive Manufacturing curriculum at IUPUI.
- Worked in a multidisciplinary environment to collaborate with students to achieve high efficiency in projects.
- Developed three Virtual Reality Modules for the Additive Manufacturing curriculum. Published 2 research papers for the work and submitted two papers for review. [Virtual Reality Modules Link ⊡]

Software Development Associate   2022/08 – Present | Remote
Monkeybar Education Private Limited ⊡

- Oversee app and website development and fulfill application demands overlayed by the co-founders.
- Discuss, enhance, and embed required functionality with app developers.
- Participated in the conception of the platform-independent application idea in order to provide a learner-friendly app to over 25000 students.
- Developed the prototype for the application in Figma single-handedly, summing all the criteria.
- Assist with app development with the Flutter framework to achieve platform independence by utilizing MySQL as a database and hosting the app on AWS.

Software Engineer Intern - Full Stack   2022/05 – 2022/08 | Carlsbad, California
Viasat Inc. ⊡

- Established backend API and frontend web app to create a full stack application that End User Survey Bot developed by the EUSX team at Viasat in an Agile software development environment using JIRA.
- Utilized Javascript on both ends of the stack, Django with ORM features, and Jquery for web page behavior.
- Designed web application (including UI /UX), taking advantage of ReactJS, Jquery, and Django REST framework.
- Migrated from Grafana to ChartJS for data visualization and analysis.
- Handled ER design and schema development single-handedly through incremental PostgreSQL migrations.
- Dockerized the application to break down components into microservices to improve development.

Projects

Exercise Tracker | ReactJS, NodeJS, MongoDB, ExpressJS, Heroku, Insomnia, GitHub ⊡   2022/01 – 2022/02
Exercise Tracking Full Stack Web Application

- Developed a MERN stack application and retrieved user data from MongoDB NoSQL database to analyze and process it in the functioning of the app with increased scalability and functionality.
- Successfully created an API on the Insomnia REST client to test the user data sending/receiving.
- Hosted the app on Heroku and GitHub Pages to obtain flexibility in production to allow for easy updating shand deployment. Customized the deployment with GitHub version control tracking.

Contact Card Generator | ReactJS, NodeJS, MongoDB, ExpressJS, Heroku, Insomnia ⬀   2021/12 – 2022/01

Random Contact Card Generation Full Stack Application

- Web-enabled a contact card generator app built in MERN stack consisting usage of an authenticated API to gain data.
- Parsed the obtained data from the API to process in the application and display to the user.
- Deployed the application using Heroku and GitHub pages to familiarize the scaling mechanisms widely used.

Command line Calculator App | Software Design, SOLID Principles, DSA, Git, OOP ⬀   2021/10 – 2021/12

Software Design Command Line Calculator App

- Implemented software design techniques by redesigning calculator app to ensure the performances and optimality.
- Incorporated SOLID principles and software design patterns to curate the application and isolate variability.
- Demonstrated the real-world system design aspects by exhibiting high cohesive nature modules with minimum coupling.

Leadership

Computer Science Teaching Assistant | Department of Computer Science, IUPUI   2022/01 – Present

- Held recitation classes for 1 hour each week to tutor 7 students struggling in class to help them meet the homework requirements.
- Helped 13 students master complicated concepts of Discrete Mathematics in one on one sessions and during office hours to obtain the best grades.
- Performed achievement-based grading to ensure fair grading and feedback to help students overcome technical challenges in the class.

President | Cybersecurity Club @ IUPUI   2021/12 – Present

- Increased membership by 125% through organizing new events such as CTF challenges, lock picking events, and alumni recruiting events.
- Sourced 5+ alumni to serve as mentors to club members through red-teaming challenges, technical workshops, and other professional activities
- Developed and managed a daily cybersecurity newsletter which is distributed to 200+ students and faculty.

Math Mentor | Department of Mathematical Science, IUPUI   2021/08 – Present

- Mentored two individual students on daily basis to help resolve technical difficulties in Math courses they were taking.
- Tutored 15 students on daily basis visiting Math Assistance Center, IUPUI struggling with Math concepts.

Publications

- J. Zhang, G. Singui, S. Wadghule, and C. Frend, "Virtual Reality Module for Additive Manufacturing Curriculum," in 2020 Illinois-Indiana Section Conference Proceedings, Indianapolis, Indiana, USA, 2020, pp. S900-1. ⬀
- Zhang, J., & Singui, G., & Wadghule, S. H., & Frend, C. E., & Dube, T. C., & Golub, M. (2020, June), Developing a Virtual Reality Module to Improve the Student Learning Experience in an Additive Manufacturing Curriculum Paper presented at 2020 ASEE Virtua ⬀

Skills

Highly Fluent: Node.js, React.js, Django, JavaScript, TypeScript, Java, Python, C, C++, C# HTML/CSS, SQL, Unix/Linux, Web API, Insomnia, Postman, Visual Studios

Proficiency: Git, Agile Development, Grafana, Docker, Helm, VSCode, PostgreSQL, AWS EC2, AWS S3, VIM, Heroku, Express. GitHub, SQL, MySQL, MongoDB, Express, Matlab, Creo, Unity, 3DS Max, Django REST framework, BASH Script