

## Ansh Sharma

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### SUMMARY

Software Engineering graduate student with projects in Agile Development, Software Testing and Deep Learning. Seeking Software Engineering internship opportunities starting current term 2024.

### EDUCATION

#### M.S. Software Engineering

Expected May 2025

Arizona State University, Tempe, AZ

3.7 GPA

**Courses:** Software Validation, Verification and Testing, Advanced Data Structures and Algorithms, Foundations of Software Engineering, Agile Systems, Programming Languages and Paradigms, Mobile Systems

#### B.S. Electronics and Communication

May 2023

Netaji Subhas University of Technology, New Delhi, Delhi

3.7 GPA

**Courses:** Data Structures and Algorithms, Deep Learning, Machine Learning, Communication, Satellite Systems, VLSI, Analog Electronics, Optical Electronics, Programming, Computer Systems

### TECHNICAL SKILLS

**Programming Languages and Frameworks:** Java, C/C++, JavaScript, Python, JSX, Prolog, HTML, CSS, React.JS, Keras, TensorFlow

**Experience:** Convolution Neural Networks, Scrum, Integration / System / Unit Testing, Asymptotic Analysis, JIRA, TDD, React.JS

**Tools:** Junit5, JACOCO, Git, Design of Experiments, White Box, Black Box, Mutation/Fuzz Test, Code Coverage, Software Validation

### PROFESSIONAL EXPERIENCE

#### Arizona State University, Tempe, Arizona: Graduate Student Assistant

Aug 2023 – Present

- Led coding sessions that resulted in a 15% improvement in students' assignment completion rates and an increase in their understanding of key software engineering concepts, as measured by pre- and post-course assessments. Facilitated Agile methodologies in course projects, with 95% of students successfully implementing Scrum, TDD, and Git version control.
- Collaborated with faculty to refine the curriculum, leading to a 10% increase in course enrollment and the successful integration of industry-relevant tools such as CI/CD pipelines, containerization, and cloud services.

#### Hiration Career Technologies, New Delhi, Delhi: React Developer and Test Intern

Jun 2021 – Aug 2021

- Implemented the React framework, employing JSX language to craft and refine components within a server-side rendered web application. Additionally, engaged with Next.js and seamlessly integrated it with Node.js for backend support in NLP modelling
- Employed Git for robust version control of the software, overseeing project management on GitHub, and facilitated deployment using Vercel. Additionally, leveraged Figma and UML tools for component design
- Adopted Exploratory Testing as a white box method for testing and Junit5 as a framework for Black Box testing. Ensured comprehensive code coverage with JACOCO and maintained quality standards using DOI

### RELEVANT PROJECTS

#### Agile Realms, Class Project

Fall 2023

- Collaborated in a 5-member team, utilizing Java Swing and Gradle frameworks to develop UI. Initially managed legacy systems and SRS, transitioning to Scrum methodology later
- Assumed the role of Scrum Master, overseeing project management duties utilizing TAIGA and JIRA, and meticulously maintaining the Sprint Backlog
- Implemented Git for efficient version control and facilitated regular Daily Scrum meetings and Sprint Retrospectives to optimize team performance
- Utilized frameworks like MySQL and SQL for backend operations. Applied TDD and various testing methodologies for comprehensive application testing. Achieved 100% code coverage reports for the crucial components and above 90% for rest

#### Traffic Detection using Deep Learning, Research Project

Fall 2022

- Developed an enhanced detection model utilizing YOLO and Sliding Windows Algorithm, achieving a 9.5% increase in efficiency in floating-point operations. Trained the model using the PASCAL VOC12 dataset
- Authored 'Efficient Detection of Small and Complex Objects for Autonomous Driving Using Deep Learning', published in the IEEE's 'CSCITA' conference, with DOI: 10.1109/CSCITA55725.2023.10104969

#### Portfolio, Personal Project

Summer 2021 - Present

- Crafted a personal portfolio with React.js, leveraging JSX for component development and CSS for styling, augmented by UI frameworks like ChakraUI. Utilized Figma for prototyping prior to project commencement
- Deployed the application on Vercel and opted for GoDaddy for online hosting. Ensured version control via Git and GitHub. Achieved 100% code coverage for almost all components according to Junit Surefire and JACOCO reports
- Employed Design of Experiments for testing, complemented by Regression Testing and ongoing exploratory tests for maintenance. Also, incorporated AI tools such as ChatGPT to optimize website components and automate test case generation