

# SHIVANG PATEL

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## Education

### University of Massachusetts Lowell

*Master of Science in Computer Science*

*Bachelor of Science in Computer Science*

Lowell, MA

*Expected 2025*

*May 2022*

- **Coursework:** Machine Learning, Algorithm Analysis, Systems Design, Agile Methodologies, Data Structures, Applied Statistics, object oriented programming, Databases,

## Technical Skills

**Languages:** Python, C++, C, JavaScript, SQL, HTML, CSS

**Technologies:** VueJS, Django, Git, GCP, AWS, Node.js, OpenCV, Bootstrap, JSON, Asana, Linux, Docker

## Experience

### Crop One Holdings

April 2022 – January 2023

*Full stack software engineer co-op*

*Millis, MA*

- Designed and implemented an application to measure plant growth performance, expediting R&D and improving data collection efficiency by 30%.
- Resolved 56 feature requests and bug fixes for a farm management software application utilizing Python and VueJS, resulting in a 20% increase in production efficiency for vertical farms.
- Engaged in cross-functional collaboration in requirement gathering, user story creation, and feedback iteration, leading to the successful completion of projects.
- Developed the "Plant Growth Monitor," an end-to-end system designed to capturing, analyzing, and storing images of plant growth. Built from scratch, this solution integrates seamless image capture, computer vision algorithms, and database storage, enabling precise monitoring and data collection on plant growth.
- Facilitated QA testing through the simulation of Programmable Logic Controller (PLC) values in internal environments, decreasing testing time by 25% and ensuring reliable development changes.
- Implemented Jenkins for automation within CI/CD workflows, leading to a 22% enhancement in code test coverage and bolstering deployment security through meticulous hash verification processes.
- Contributed to the talent acquisition process through active involvement in intern interviews, selection of competent candidates, and document creation to streamline handovers for incoming development teams.

## Projects

### Marketplace homestays | *NextJS, Tailwind css, Typescript, Prisma, MongoDB*

- Developed a scalable and user-friendly accommodation search feature using Next JS, allowing users to easily explore and filter listings
- Implemented a robust filtering system with TailwindCSS, providing a seamless user experience with combined filters and responsive design
- Designed and developed a secure and intuitive account creation process using Typescript, enabling users to manage their reservations, favorite accommodations, and property listings
- Built a comprehensive property management system integrating Prisma and MongoDB, ensuring data consistency and accuracy throughout the application

### Sorting Algorithm Visualizer | *HTML, CSS, JavaScrip, Bootstrap, jQuery*

- Created Sorting Algorithm Visualizer web app with HTML, CSS, and JavaScript, improving algorithm understanding.
- Added adjustable parameters for array size and speed, enabling users to customize learning and compare performance.
- Integrated popular algorithms, and optimized user experience by implementing intuitive controls.

### Lane Detection System | *Python, OpenCV, NumPy, MoviePy*

- Developed a lane detection algorithm with computer vision, improving autonomous vehicle navigation precision.
- Built a Python-MoviePy pipeline for video frame processing, integrating lane line detection and visualization.
- Optimized lane line extrapolation and region-of-interest definition for enhanced accuracy and efficiency.