

# RAVJODH HEER

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## EDUCATION

### University of California, Santa Cruz

Santa Cruz, CA

#### B.S. Computer Science

June 2023

- *Relevant Courses:* Software Engineering, Operating Systems, Data Structures and Algorithms, Algorithm Analysis, Programming Abstractions in Python, Computational Models, Computer Systems & Assembly Language, Discrete Mathematics, Foundations of Programming Languages

## EXPERIENCE

### SproutLabs

Santa Cruz, CA

#### Software Engineer

Jan 2023 – Jun 2023

- Developed a sleek and intuitive website for SproutLabs as part of a highly collaborative team of four, focusing on delivering a seamless user experience through a visually appealing UI design.
- Implemented robust unit testing and end-to-end testing strategies to ensure the reliability and stability of components, ensuring high-quality code and minimizing potential issues during the development cycle.
- Contributed to the creation of an efficient and user-friendly admin dashboard, fetching data from back-end servers to display vital readings from SproutLabs devices currently deployed on farms, thus enabling users and admins to monitor and manage the devices effectively.

### Amazon Web Services (AWS)

San Francisco, CA

#### Cloud Support Engineer

Jun 2023 – Present

- Designed a responsive full-stack web application using React.JS, Node.JS and DynamoDB to display an interactive web portfolio on the AWS cloud.
- Successfully completed a personal project to migrate a non-cloud video game application to AWS cloud.
- Gained experience with AWS Lambda, Amazon EC2, Amazon S3, Amazon EBS, Amazon VPC, Amazon Elastic Load Balancing, and Route 53.

## PROJECTS

### Roomy Social Media Application

Sep 2022

#### Product Owner - Lead Developer

- Developed a social media web application using Javascript and Firebase that allows renters, landlords and roommates to connect and develop social relationships through posts, comments, property listings and rental applications as well as private messaging.
- Led a team of software developers to develop the front and back end of the web application by learning and implementing previously unfamiliar technologies and languages including React.JS, Redux.JS and Firebase as well as some HTML and CSS.
- Utilized agile development techniques and SCRUM methodology to aid in project management and unit testing of key application features.

### DetectX AI license plate detector in Python

Jan 2023

#### Founder - Sole Developer

- Developed a python application that takes an image as input and deploys a machine learning algorithm to identify and mask license plates in the image and then deploys an Optical Character Recognition (OCR) algorithm to return the license plate number as text from the masked image.
- Utilized Python OpenCV(cv2) open source library to aid in image detection and masking as well as PyTesseract API to process text from image and return as string.
- Programmed to support object detection, instance segmentation, multiple object tracking and real-time multi-object keypoint detection.

## SKILLS

**Technical:** C, C++, Python, Java, Javascript, React.JS, Redux.JS, HTML, CSS, Assembly Language, Linux, Windows, Git, Amazon EC2, Amazon VPC, Amazon EBS, Amazon Redshift, Amazon DynamoDB, Amazon RDS, Amazon S3, AWS Elastic Beanstalk, AWS CLI, Amazon CloudWatch, Amazon CloudFront, AWS CloudFormation, AWS Lambda, VIM, Amazon Web Services, Computer Hardware, Operating Systems, Cloud Applications

**Languages:** English (Proficient), Punjabi (Native), Hindi (Intermediate), Spanish (Intermediate)