

Tejas Gajare

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EDUCATION

Syracuse University - College of Engineering & Computer Science, Syracuse, NY May 2021 - May 2023
Master of Science, Computer Science

- Course work: Data Structures and Algorithms, Natural Language Processing, Structured Programming and Formal Methods, Computer Architecture.

Savitribai Phule Pune University - Pune, India May 2015 - May 2019
Bachelor of Engineering, Computer Engineering (3.54 / 4.0)

- Finalist for ACM International Collegiate Programming Contest (ICPC) Asia Regionals 2019 (Gwalior-Pune).
- Ranked 6th in country for ABU Robocon (India), 2017 - Deployed Motion tracing on Robot to map trajectory of a Frisbee.

SKILLS

Languages: Python (*proficient, 5 years*), C++ (*proficient, 3 years*), SQL (*proficient, 3 years*), Java (*intermediate, 2 years*), JavaScript (*intermediate, 2 years*).

Tools: Git, Django, Flask, Angular, React, Spring Boot, Android SDK, OpenCV, Docker, TensorFlow, Keras, VueJS, Vuetify.

Databases: Microsoft SQL Server, PostgreSQL, Firebase.

WORK EXPERIENCE

Software Engineer, Yardi – Pune, India August 2019 - April 2021

- Collaborated with a team of 3 to design tool for generating data scrubbing templates, allowing clients to comply with CCPA & GDPR; improved data scrubber to incorporate complex hierarchical database relationships.
- Devised algorithm to predict database fields that could store sensitive information and respective scrub update value reducing database field selection time by half.
- Developed Harbor Management System using .NET and Microsoft SQL Server, facilitated lease tracking, waitlist handling and vessel permitting; application increased leasing efficiency by 60%.

Software Engineer Intern, Persistent Systems – Pune, India April 2018 - July 2018

- Developed an Android application using Java to calculate physical dimensions of apartments without any external equipment.
- Implemented OpenCV algorithm to detect fixed sized markers in image to calculate perceived dimensions by applying geometric similarity; leveraged optimizations in C++ and as a result, number of frames per second (FPS) increased by 80%.
- Completed project under guidance of 2 vertical heads to understand and provide solutions for customer specific requirements.

SELECTED PROJECTS

A Torch Without Light: Advanced Night Vision - [Publication](#)

- Built mobile app to capture images in extreme low-light conditions and retrieve high quality image from a remote Convolutional Neural Network implemented using TensorFlow; low-light images were amplified by up to 300 times with noise reduction.
- Trained model on dataset of 450 RAW images shot in low-light conditions and respective ideal lighting conditions; pre-trained model from reference paper was also used.
- Integrated OkHttp Multipart Upload Lib with Android's Camera2 API to capture RAW images on mobile and transfer to remote Flask server; average total processing time was under 30 seconds.

Critical Care - [Website](#)

- Created a web application to allow doctors to curate and track customized nutritional plans; reduced number of steps from previous nutrition tracking system by 50%.
- Optimized nutrition monitoring process by storing intermediates states in Firebase and allowing users to resume nutrition plan from previous state; used VueJS and Vuetify for frontend.
- Analyzed challenges faced by hospitals with limited resources and delivered a cost-effective solution; application was adapted by 8 hospitals.

Feedback Collection System: Delhi University

- Built a Django web application for Delhi university to create and publish feedback/survey forms with customizable questionnaires; custom form creation provided users with flexibility of up to 6 different input types.
- Performed sentiment analysis using Python NLTK's Vader Algorithm (Naive Bayes Classifier) on given reviews and comments; collected 3 times more information from comment-based answers by applying keyword extraction.

Smart Road Sign Translator

- Constructed an application for vehicle drivers to deliver real-time translations of the Road Signs in native languages.
- Combined OpenCV Object detection with Tesseract OCR to detect, extract and translate text from the Road Signs; decreased frame processing time by localizing the Region of Interest down to 35%.