

SIDHARTH SINGH

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[Email](#) ♦ [LinkedIn](#)

EDUCATION

Masters of Computer Science, Simon Fraser University
Bachelors of Information Technology, SRM University

September 2022 – December 2023
July 2015 – May 2019

SKILLS

Programming Languages	Java, JavaScript, TypeScript, Python
Tools & Frameworks	PostgreSQL, Keycloak, Docker, Spring Boot, Angular, React, Git

DEEP LEARNING EXPERIENCE

Image Super Resolution with Diffusion Models Simon Fraser University

- Motivation : Comparison of various diffusion models related to super resolution
- Implementation : Experimented with High Resolution Image Synthesis with Iterative Refinement and Latent Diffusion Model for Super Resolution
- Result : Magnification size of 4x with 64x64→256x256 and 256x256→1024x1024 was achieved
- Project Link : [Super Resolution with Diffusion Models](#)

Biomedical Image Segmentation using U-Net

Simon Fraser University

- Motivation : I wanted to perform semantic segmentation with biomedical images
- Implementation : Implemented [U-Net: Convolutional Networks for Biomedical Image Segmentation](#)
- Result : Achieved around 76% accuracy with hand tuning of model
- Project URL : [Biomedical Image Segmentation](#)

Autoencoders

Simon Fraser University

- Motivation : Compare various autoencoders
- Implementation : Implemented three variations of autoencoders on MNIST dataset
- Result : The patch got blended successfully
- Project URL : [Autoencoders GitHub](#)

Poisson Blending

Simon Fraser University

- Motivation : Blend the given image into another images
- Implementation : Solved the constrained matrix equation to implement Poisson blending
- Result : The patch got blended successfully

Intern

Supervised by Rajesh Jeyapaul, IBM

June 2019 – September 2019
Bengaluru, India

- Developed facial spoofing using Keras
- Utilized the Liveness Detection and dlib library
- Deployed the Keras model on IBM Watson Machine Learning
- Implemented REST API link to call the deployed model
- Developed client side script using python on Raspberry Pi

EXPERIENCE

Research Assistant

Simon Fraser University

January 2023 – Present

Burnaby, Canada

- Research about "Gamification in Learning"
- Perform data analysis on information about 400 students to expose underlying patterns in learning, encouragement and motivation
- Relate the data to previous learning theories

Software Engineer

ANQ Digital Finserv Private Limited

June 2022 – August 2022

Bengaluru, India

- Developed the website and mobile application with Next.js and react native respectively
- Implemented a back-end framework that generates APIs using Deno.js from JSON file for DB schema
- Managed bugs in production for container deployments
- Used Microsoft Clarity to get insights for website usage

Software Engineer

Subex Limited

March 2021 – March 2022

Bengaluru, India

- Utilized Angular 9 to develop multiple web components
- Used Keycloak IAM for Single Sign-On and OAuth
- Implemented Jasmine for Test-driven Development in Angular
- Updated CI/CD bash scripts which prevented creation of Keycloak Database
- Developed multiple REST APIs using Spring Boot
- Provided sessions on Ubuntu, Docker and Keycloak

Freelance

GeoMeo

March 2020 – July 2020

Madurai, India

- Developed a chat bot using IBM Watson that provides COVID information
- Applied IBM code patterns to develop a framework for Android activity
- Implemented IBM's Web Scraper to gather FAQs