Manjush Mangal

(+91) 82799-69120

🏠 manjush08.github.io   ✉ manjushmangal   in manjushmangal   ⬤ manjush08

Education

2014 - 2018	**Bachelor of Technology in Computer Science and Engineering (CGPA 8.1)**
	Indian Institute of Technology, Mandi, Himachal Pradesh
	Selected as exchange student to BTH Sweden (Jan-Jun 2017) on Erasmus+ICM Scholarship.
2000 - 2014	**Secondary and Higher Secondary School**
	Brij Bhushan Lal Public School, Bareilly, Uttar Pradesh
	All-India Secondary School Certificate Examination (95.6%)
	All-India Secondary School Examination (CGPA 10)

Work Experience

Jul 2018 - till date

Software Engineer

Siemens Technology and Services Pvt. Ltd., Bangalore

Responsible for development of API Contracts, SDLC Management, deployment & runtime management of software and production support. Tech Stack: NodeJS, Typescript, MongoDB, Hyperledger Fabric, application deployment on AWS EKS using Terraform, Unit Testing using Mocha, Chai.

Projects:

- HyperCar: Online Tesla Fleet Booking Application using Decentralized Ledger to serve multiple vendors.
- MilesBlock: Tracking the delivery milestones using blockchain (supply chain management)

Responsible for writing scripts to enable test case selection and prioritization in CI with the goal to minimize round-trip-times between code commits and developer feedback on failed test cases.

Jun 2017 - Aug 2017

Software Development Intern

Webstaff Co. Ltd., Tokyo

Responsible for digitizing 10K Japanese handwritten Resumes, categorize and classify them to make filtering/searching easier for the HR team.

Used Python Scripting, OpenCV, OCR Correction, NLTK Libraries, Google Vision API.

Projects

- **Freelance Project (Coworking Platform) –** Responsible for Discounts feature addition to the Application, and handling invoice changes. Migration of ERP from QuickBooks to NetSuite. Uses Flask web-framework, PostgreSQL as Database and implements MVC design pattern.
- **Bird Detection and Classification from Images -** Fine-tuned YOLO's Object Detection Engine to perform well for local bird species. Object Classification using Convolution Neural Networks. Used VGG 19 Model to train and classify Birds. Increased state of the art accuracy by incorporating variable sized images in training and testing using Spatial Pyramid Pooling and Deep Spatial Pyramid Match Kernel.

Publications and Patents

- **CNN-Based Deep Spatial Pyramid Match Kernel for Classification of Varying Size Images**
  - Springer, Cham - Chapter 3
  - Deep Spatial Pyramid Match Kernel and Spatial Pyramid Pooling approaches for handling varying sized images in Convolutional Neural Networks
- **A Blockchain and Digital Twin based approach for transparent and secure product certification**
  - The central idea is to build a framework that facilitates immutability of tests performed on a physical product (or its parts) and by correlating the results with the behavior of corresponding DT.
  - *Patent filed with EU*

Open-Source Contribution

- Contributor to BigchainDB: Bug Fixes and Improvements

Relevant Courses

- Advanced Data Structures and Algorithms
- Mathematical Foundations of Computer Science
- Communicating Distributed Processes
- Database Practicum
- Data Visualization
- Software Design Patterns

Technical Skills

- **Programming Languages:** Java, Python, C, C++, JavaScript, Typescript, Bash
- **Dev-Ops Technologies:** nginx, apache2, Terraform, Gitlab CI
- **Databases:** PostgreSQL, MySQL, MongoDB, Cassandra, Redis, Neo4j
- **SE Technologies:** NodeJS, Flask, Spring Boot, Git, AWS
- **App-development:** Firebase
- **Blockchain Frameworks:** HyperLedger Fabric, Ethereum