# Gagandeep Singh

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## PROFILE OF SKILLS

- Worked closely with the design team, thoroughly understanding various design documents to develop precise solutions aligned with business needs, ultimately contributing to the successful delivery of projects.
- Spearheaded the proposal and implementation of innovative solutions to automate and streamline the testing process within the team, significantly expediting development timelines and contributing to the overall success of the team.
- Utilized both Software Development Life Cycle (SDLC) and Agile methodologies to meticulously design, develop, test, and deploy software solutions tailored to meet client specifications.
- Led a team of 4-5 developers in a project aimed at accelerating the software development process and enhancing team efficiency.
- Demonstrated a proactive attitude towards change, consistently embracing new technologies to foster personal and team growth, thereby adeptly tackling challenges and enhancing overall effectiveness.

## TECHNICAL SKILLS

**Languages:** Javascript, Typescript, Python, Java, C++, C, C#, SQL, HTML, bash

**Databases:** MongoDB, Firebase, PostgreSQL

**Frameworks/Libraries:** ReactJs, NodeJs, AngularJs, ExpressJs, Tailwind, SCSS/SASS, Spring Boot, Selenium, Redux, Tensorflow, Keras, pandas, numpy

**Tools:** Git, Postman, Docker, Jenkins, GitHub Actions, Jira, NPM, AWS, GCP, Splunk, SoapUI, MS Word, Powerpoint

**Visualization Tools/Libraries:** D3Js, ChartsJs, Excel, Matplotlib

## EDUCATION

### Master of Applied Computing Artificial Intelligence Stream
**Windsor, Ontario, Canada**
University of Windsor
Sep 2023 - Dec 2024
**Courses:** Software Engineering, Computing Concepts, System Programming, Database Technologies, Statistics Learning, Machine Learning
**Note:** Final semester of program requires a 4-8 months of internship that would start in September 2024

### Bachelors of Technologies in Computer Science
**Ludhiana, Punjab, India**
Guru Nanak Dev Engineering College
Sep 2016 - Aug 2020
**Courses:** Data Structures, Algorithms, Cryptography, Networking, Operating Systems, Cloud Computing

## WORK EXPERIENCE

### Software Engineer
**Gurugram, India**
Accenture
Nov 2020 - Aug 2023

- Developed a Banking Campaigns Management System with React and Node.js, leveraging polling and web workers for non-blocking code and implementing optimizations that reduced backend processing time from 2 minutes to 40 seconds, achieving a 70% increase in performance.
- Designed and implemented interactive widgets using D3.js to visualize Key Performance Indicators (KPIs), providing clients with actionable insights derived from data analysis.
- Developed and integrated customized solutions for clients by creating and rigorously testing multiple REST and SOAP-based middlewares, closely aligning with design documents and collaborating effectively with the design team.
- Played a pivotal role in streamlining the development process and expediting testing by actively participating in the creation of several internal applications.
- Refactored multiple APIs from scratch to optimize workflow, significantly reducing processing time and enhancing efficiency.

### Software Developer
**Ludhiana, India**
Auribises Technologies
Jan 2020 - Aug 2020

- Led development of a CRM portal utilizing Angular and Google Firebase, aiming to streamline organizational processes for products, projects, and client relationships.
- Applied Observer Design Pattern using RxJs to achieve modular application architecture and better user experience.
- Built a secure, role-based authentication in Firebase and Angular Guards to regulate access, resulting in a robust authentication system to manage user roles, ensuring controlled access, and safeguarding sensitive areas of product.
- Worked on server-side business orchestrations by writing Google Cloud Functions, resulting in an efficient and optimized solution.

### Web Development Intern

**Ludhiana, India**

Auribises Technologies

Jul 2019 - Dec 2019

- Acquired expertise in Angular and Google Firebase during a six-month internship through active participation in learning sessions and practical exercises.
- Wrote an Angular-based Admin Portal for an agriculture-based application, incorporating features such as order management, membership management, and user management to efficiently oversee mobile app.
- Integrated Firebase for secure data storage and authentication, concurrently addressing client needs by leveraging Charts.Js for tailored data visualization.
- Increased project management efficiency through Git for version control, while elevating code quality through refactoring existing code with latest JavaScript ES6 features.

## PERSONAL PROJECTS

### NetShell

**GitHub**

C, Socket Programming, Load Balancer

- Developed NetShell, a command-line shell application facilitating the execution of Linux commands over the network. Implemented using C socket programming, It mimics client-server architecture. Clients connect to the server to execute shell commands, while the system incorporates two mirror servers and a load balancer for efficient resource utilization via request redirection. Included robust client-side request validation to ensure system integrity.

### EmployeeFatigueScorePrediction

**GitHub**

Python, Scikit Learn, Numpy, Pandas, Matplotlib, Data Analysis, Model Tuning

- Utilized exploratory data analysis (EDA) techniques to gain insights into employee data for a machine learning project aimed at detecting Mental Fatigue Scores. Employed various visualization methods to understand data distributions and relationships. Implemented a range of machine learning techniques, including neural networks, to train predictive models. Conducted feature selection to identify the most relevant attributes and reduce dimensionality, enhancing model performance. Employed hyperparameter tuning methods to optimize model accuracy, achieving over 90% accuracy in predicting Mental Fatigue Scores.

### Salary Stratos

**GitHub**

Java, React, Spring Boot, JSoup, Selenium, Data Structures

- Crafted Salary Stratos, a Full Stack web application employing React for the frontend and Java with Spring Boot for the backend. This innovative platform elevates the job search experience by integrating a robust search engine capable of retrieving job listings from multiple platforms. Leveraged a custom Trie data structure to efficiently store keywords, enabling swift and accurate searches. Implemented advanced features such as spell checking, word completion, and frequency counter to enhance search precision for users. Integrated a page ranking algorithm to sort job listings based on various factors, optimizing search results and enhancing overall customer satisfaction. It also has real-time job scraping functionality using selenium to continuously extract new job listings, ensuring users have access to the latest opportunities available across various platforms.

### Vision Player

**GitHub**

PyQT5, Python, OpenCV, Pillow, ACRCloud API, Computer Vision

- Build VisionPlayer, an innovative Python-based music player that revolutionizes user interaction through hand gesture control facilitated by an image classifier. The concept behind VisionPlayer is to harness sensor and machine learning technologies to enhance user experience and streamline interaction with computer applications. This pioneering approach not only enriches user interaction but also fosters ease of use across various applications. Additionally, VisionPlayer incorporates features such as filling out missing song details through audio recognition libraries, further enhancing its functionality and usability.

## ADDITIONAL AND VOLUNTEER EXPERIENCE

### Techincal Lead

**Windsor, Ontario**

Engineering4.0 Club, University of Windsor

Nov 2023 - May 2024

- Led a team of three as the Technical Lead for the Engineering4.0 club at university. Oversaw the complete revamp of the club's official website, improving its design and functionality. Provided guidance and mentorship to team members to ensure project success and enhance their skills.

### Web Developer (Remote)

**Missouri, USA**

ForgottenAdoptionOption

Jun 2023 - Jul 2023

- Developed a web application for a non-profit organization focused on facilitating adoptions through foster care. Integrated a map visualization feature using D3.js to display real-time counts of children awaiting adoption, enhancing transparency and accessibility for users. This project aimed to streamline the adoption process and support the organization's mission to find loving homes for children in need.