# Chirag Gomber

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As an Analyst at Goldman Sachs, I have gained insight into developing robust, scalable and complex back-end and front-end architectures. Also being an Open-Source advocate I have developed essential software developer skills with an interest in AI and Cloud.

## Education

**SRM Institute of Science and Technology** 2018 - 2022
*Bachelor of Technology in Computer Science and Engineering (CGPA: 9.8 / 10.0)* *Chennai, Tamil Nadu*

## Experience

**Goldman Sachs** June 2022
*Analyst (Software Engineer)* *Bengaluru, Karnataka*

- ***Risk Division*** (Current)
  * Developing an Operational Risk application for capital management, utilized by the GS Risk division to track risk events and their capital allocation
  * Successfully transitioning our metrics application to AWS cloud, eliminating legacy dependencies, and enhancing reliability and performance
  * Incorporating features to meet U.S. federal audit requirements
  * Developed with technologies including **Spring Boot Java**, **ReactJS (Typescript)**, **AWS**, **Kubernetes** and **GitLab CICD**
- ***Asset and Wealth Management Division*** (April 2024)
  * Developed a billing system for Private Wealth Management to manage accounts for ultra high net worth clients
  * Led the onboarding to Kubernetes and implemented Docker for our system, enabling vertical and horizontal scaling. Implemented monitoring using **Grafana** and logging with BigQuery
  * Enhanced a complex, rule-based fee calculation system developed as a framework, integrating data sourced from and distributed to multiple global teams within the firm

**Kabam.ai** Jan 2022 – April 2022
*Robotics Intern* *Singapore*

- Collaborated on integrating video and data feeds from Kabam's robot, leveraging AWS Kinesis for real-time inference in the cloud. Implemented synchronous data refeeding to the robot with actionable results
- Developed and deployed computer vision models for tasks such as background segregation, enhancing accuracy and performance in visual data analysis

**Mitacs — University of Sherbrooke** Aug 2021 – Nov 2021
*Research Intern* *Montreal, Quebec (Canada)*

- I was offered a fully funded research program to automated IoT-based data analytics for smart cities, specializing in semantic ontologies and employing descriptive logic and fuzzy logic reasoners. Utilized technologies such as Apache Jena and Protégé to develop a robust smart home system
- Designed and implemented systems to enhance data processing efficiency and accuracy, contributing to the advancement of smart city infrastructure

**National University of Singapore — Hewlett Packard Enterprise** June 2019 – Jul 2019
*Research Intern* *Singapore*

- Engineered an American Sign Language interpreter utilizing artificial neural networks and state-of-the-art machine learning and deep learning architectures for big data analysis
- Gained insights in Hadoop system administration by deploying clusters from scratch, enhancing proficiency in managing large-scale data processing environments

## Achievements

**Smart India Hackathon 2020 winner** *(Problem by HealthRx (**Bajaj Finserv Health Limited**)*: Digitized different kinds of printed lab reports/health check report to discrete values of each parameter captured. Conversion to a standardized set of digitized values will help in automating a lot of backend approval process.

**College scholarship:** Got **30%** scholarship during my B.Tech for my class performance and high school result

## Open Source Contributions

**Grafana** | *TypeScript*, *Go*, *Docker*

- Enhanced Grafana core functionality by resolving issues and integrating new features
- Contributed to the development of external plugins like Prometheus and InfluxDB, improving their functionality and compatibility

**OpenMined (PySyft)** | *Python*, *C++*, *Jupyter Notebooks*, *TypeScript*

- Integrated third-party libraries into PySyft as a PyPrimitive class, ensuring compatibility across versions
- Implemented unit tests to maintain robustness and reliability of integrated features

**Facebook Research (Detectron2)** | *Python*, *C++*, *Machine Learning*

- Revamped x264 support and checking mp4v codec availability for exporting the final generated output alongside updating checks for running on google-colab

**PyTorch** | *Python*, *C++*, *Machine Learning*

- Re-engineered suppressing spurious Numpy warning which is generated at the level where tensor generation operation is called in C++

## Projects

**American Sign Language Interpreter** | *Python*, *Tensorflow*, *Keras*

- Developed an American Sign Language interpreter using Python with TensorFlow and Keras frameworks
- Implemented real-time gesture tracking and translation of fingerspelling into English alphabet letters
- Designed as an open-source project to encourage collaboration and innovation among researchers and developers

**Bread and Butter Machine Learning** | *Python*, *NumPy*

- Created an independent library featuring a variety of supervised and unsupervised machine learning algorithms, including linear models and naive Bayes classifiers
- Built with vanilla Python and optimized using NumPy for efficient parallel processing
- Aimed at providing accessible tools for machine learning enthusiasts and practitioners

**Health Report Digitisation using OCR** | *Python*, *ReactJs*, *AWS*

- Led the development of a system to extract and structure data from health reports and prescriptions using OCR technology
- Designed to automate backend approval processes by converting printed reports into standardized digital formats
- Leveraged cloud technologies such as AWS and Google Cloud Platform (GCP) alongside custom architectures for robust report analysis

## Technical Skills

**Backend**: Java, Spring Boot, Python
**Frontend**: ReactJS, TypeScript, Redux
**Database**: SQL, Presto, MongoDB, Postgres
**Technologies**: AWS, Kubernetes, Docker, Grafana