Swarup Ghosh

+91-89615-17827
swarup.ghosh@gdgu.org, snwg@live.com
: swghosh
: swgghosh

Education

- B.Tech (Computer Science and Engineering)
  - 2017-2021, G D Goenka University, Gurugram
  - Current CGPA: 9.04/10.0

  Relevant Coursework
  - Stanford Machine Learning (Coursera)
  - Data Structures and Algorithms
  - Design and Analysis of Algorithms
  - Basics of Image Processing
  - Calculus for Engineers
  - NoSQL Databases
- Indian School Certificate (Science)
  - 2017, Delhi Public School Newtown, Kolkata
  - Aggregate: 86%

  - Google Maps APIs (Udacity)
  - Software Engineering and Testing Methodologies
  - R Programming
  - Object Oriented Programming through Java

Technical Skills

- **Languages:** Python, C, JavaScript, Java, Swift, R
- **Libraries and Frameworks:** Keras, TensorFlow, OpenCV, Scikit-Learn, Flask, Node.js, Paho
- **Tools:** Git, Docker, Markdown, Google Maps
- **Areas:** Computer Vision, Machine Learning, DevOps, Open Source, Web Micro Services
- **Platforms:** Linux, Google Cloud Platform, Cloud TPUs, Amazon Web Services, Heroku, OpenShift
- **Databases and Storage:** MongoDB, Google Cloud Storage, AWS S3, MySQL, PostgreSQL

Projects

- *DeepFace* **[September 2019]**

  Developed an open-source Keras based implementation of the publication "DeepFace: Closing the Gap to Human-Level Performance in Face Verification". The proposed network architecture by Taigman et al. was trained on publicly available faces dataset (consisting of few million images) using TensorFlow data pipelines and accelerated by Cloud TPUs. The original DeepFace implementation uses a proprietary Facebook dataset and there are no other openly available implementations yet.
- *Realtime Attendance Project* **[September 2018-present]**

  Working on a project to make realtime attendance marking possible primarily using OpenCV, Scikit Learn, TensorFlow and Flask. Ongoing research in the fields of various Machine Learning models and Computer Vision techniques to tackle the different challenges relating to it. Attempts are being made gradually to develop a complete production ready system and to compare the various approaches used in facial recognition literature.
- Stock Exchange Simulator [September 2016, April 2017]

  Wrote a programmatic interface from scratch using CoreGraphics to allow plotting on iOS device views. The graphical plotting component of the application can draw charts, show plots for 2D mathematical functions. Worked at high school level to deliver an *application* that served to simulate a stock exchange simulator for a school fest event. An *iOS app* as well as cloud native *web application* was developed. Received a **Letter of Appreciation** from Delhi Public School Newtown for the same.
- Virtual Trader Application [August 2017, August 2018]

  Worked with Christ University, Bangalore to develop a cloud-native (iOS-like UI) *web app* that is capable of simulating an *automated stock commodity market* with support for virtual trading. The automated scripts were backed by Node.js.
- *Micro Climatic Modelling Project* [April 2018-February 2019]

  Worked on a project to gather different climatic parameters using IoT based devices and develop a small platform to host and visualise the data. It deals with use of pub-sub messaging, voluminous amount of sensor data and maps.

Activities

- Delivered a *workshop on API development using Node.js*, organised by GD Goenka University Coders Club to introduce students with asynchronous programming and mentor them on how to develop web servers from scratch using Node.js http library only.
- Delivered a *workshop on Open Source and Git*, organised by GD Goenka University Coders Club to promote awareness about open source technologies and introduce students with Git VCS besides emphasising the need for community driven development.
- Participated at *Kharagpur Winter of Code 2018* to work and make open source contributions to a project based on OpenStreetMaps that is based on realtime disaster relief.