# Sukruth Gowdru Lingaraju

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## Education

- **Cornell University** — Ithaca, NY
  Master of Engineering in Computer Science — *August 2022 - August 2023*
  Courses: Machine Learning, Computer Vision, Advanced Database Systems, Project Management, Social Entrepreneurship
- **M S Ramaiah Institute of Technology** — Bangalore, India
  Bachelor of Engineering in Information Science — *August 2018 - July 2022*

## Skills Summary

- **Languages** : Python, C, C++, Java, SQL, Matlab
- **Libraries** : Numpy, Pandas, Scipy, scikit-learn, cv2, OpenSmile, OpenFace, OpenPose, Selenium, BeautifulSoup
- **Tools** : GCP, Postman, Springboot, Jenkins, Git (VCS), Bitbucket, VSCode, PyCharm, IntelliJ

## Experience

- **FARLab, Cornell Tech** — New York City, NY
  Research Intern - under **Prof. Wendy Ju** in the Future Automation Research Laboratory. — *May 2023 - Current*
  - Engaging in research to unravel the correlation between human empathy and task failure performance in humans and robots.
  - Managed data acquisition & preprocessed 'In the Wild' stimulus data, analyzing human facial reactions in response to task performance in humans and robots.
  - Executed the identification and extraction of features to determine the root causes of responses, effectively discriminating between human and robot task failure.
- **Sabre Corporation** — Bangalore, India
  Software Engineer Intern — *January 2022 - July 2022*
  - Engineered RESTAPIs utilizing SpringBoot to retrieve passenger & flight data from Sabre's Oracle database for the 'Departure Control System (DCS) - IQ: Recommendation Engine' to facilitate automated passenger upgradation in airlines.
  - Implemented a robust data delivery system using GCP and engineered scalable pipelines for data transfer and integration, ensuring efficiency and reliability in GCP services.
- **Bangalore Endoscopic Surgery Training Institute and Research Centre (BEST)** — Bangalore, India
  Data Analyst Intern — *March 2021 - August 2021*
  - Executed data acquisition and performed preprocessing tasks on data collected from onboard integrated sensors.
  - Designed & implemented machine learning models (SVMs & DNN) for the classification and quantification of task performance.
  - Performed synthetic data generation and data augmentation for regularisation of learning models.
- **Cornell Bowers CIS** — Ithaca, NY
  Graduate Teaching / Research Specialist (GTRS) — *August 2022 - January 2023*
  - Graduate TA for the course CS 2024 [C++] during Fall '22 semester.

## Academic Projects

- **Humans, Robots and Empathy: Investigating Bystander Reactions to Failure** — Funded by : Accenture — Worked towards understanding the human empathy in relation to task failure performance, both in humans and robots to explore the intricacies of human emotions and utilize this comprehension as a learning parameter for robots. By recognizing their actions and leveraging this understanding, the aim is to empower robots to improve their performance in a variety of tasks.
- **Sign Language Translator for the Vocally Challenged (Deaf-mute) using Sensor - based Hand Gesture Recognition (HGR)** — Funded by : Artificial Intelligence and Robotics Technology Park (ARTPARK), Indian Institute of Science (IISc) — Designed and developed a Data Glove that utilized Inertial Measurement Unit (IMU) Sensors and Flex Sensors to capture precise finger movements. Using the collected data, a Neural Network was trained and tested to classify multiple gestures. The classified gestures were then fed into an NLP model, which generated spoken language sentences/phrases and provided context-based corrections using full sentences as input.

## Journal Publications

- **Sukruth G L**, Vijaya Kumar B P, Tejas M R, Rithvik K and Trisha Ann Tharakan, "Enhancing Collaborative Interaction with the Augmentation of Sign Language for the Vocally Challenged" International Journal of Advanced Computer Science and Applications (IJACSA), 14(1), 2023. DOI: http://dx.doi.org/10.14569/IJACSA.2023.0140199.