

EDUCATION

- **State University of New York at Buffalo** Buffalo, NY
Master of Science in Computer Science Sep. 2021 – Present
- **National Institute of Technology, Durgapur** West Bengal, India
Bachelor of Technology in Computer Science and Engineering July 2014 – May 2018

RELEVANT COURSES

Data Structures & Algorithms, Machine Learning, Reinforcement Learning, Computer Vision & Image Processing

SKILLS

- **Languages:** Python, SQL, Bash, Dart, JavaScript
- **Scientific Libraries:** Pandas, NumPy, Matplotlib, Scikit, SQLAlchemy
- **Tools:** Docker, Compose, Kubernetes, PostgreSQL, Redis, Sentry
- **Frameworks:** Django, Flask, Flutter, PyTorch, PySpark, FastAI, OpenCV
- **Cloud:** GCP, Heroku, AWS

EXPERIENCE

- **Brave Orbit** Capetown, South Africa
Full Stack Developer Jan. 2020 - Aug. 2021
 - Assisted in re-developing a popular healthcare app into a cross-platform mobile application using Flutter. Involved in features such as setting up BLoC, database and network layers
 - Designed & developed HIPAA compliant scalable push notification service for a medication reminder app
 - Implemented an API on top of the NIH and MPR APIs to retrieve medication data and interactions. Caching was set up to improve the performance of API calls
 - Developed a clinical surveying platform that sends out email and SMS alerts to patients and collects feedback periodically
 - Lead a team in developing a custom ERP system using Django for a supermarket that was critical in helping them survive a 5X growth due to the COVID-19 outbreak
 - Orchestrated docker container cluster using Kubernetes and CI/CD pipelines were setup to deploy on GKE
 - Setup NGINX reverse proxy server with SSL to forward the traffic to services based on the sub-domain
- **Accenture** Bangalore, India
Advanced Application Engineering Analyst Sep. 2018 - Dec. 2019
 - Transformed large volumes of drug life cycle data and hierarchies of drug materials were generated using PL/SQL procedures on a multi-node Redshift cluster
 - Performed trend analysis on drug potency data using PySpark on a EMR cluster to find the performance variability of drug analytical methods. Several statistical measures are performed and colour coded control charts are visualised on a spotfire dashboard
 - Assisted in designing and development of an automated data validation ETL pipeline leveraging microservice architecture to validate data across a wide range of data sources that resulted in 70% effort reduction and 75% cost saving on infrastructure
- **Vishakapatnam Port Trust** Visakhapatnam, India
Software Intern May 2017 - July 2017
 - Developed a prototype for a computer vision-based monitoring solution for the port cargo handling area
 - Created datasets and trained the model using support vector machine (SVM) to identify cargo lease area and cargo type

RELEVANT PROJECTS

- **DeepJet Autonomous Car (work in progress)** [code](#)
 - Assembled the car with Jetson Nano as its brain. Implemented WebSocket to exchange data with the controller
 - Cross-platform mobile app was build to control the car. WebRTC protocol is used to receive real-time camera feed
- **Mask Detection REST API** [code](#)
 - Built a server-less deep-learning API service using Django REST Framework to classify images into 3 buckets (with mask, without mask, improperly worn mask)
 - CI/CD pipeline was setup to automatically build the docker container and deploy in Cloud Run
- **Gender Classification Using CNN – Graduate Thesis**
 - Implemented Gil Levi and Tal Hassner's deep neural network architecture in PyTorch, tweaked the network layout, and evaluated various second-order optimisation techniques
 - Retraining the model with varying dataset resolutions resulted in an 86.3% accuracy