

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, Java, HTML, CSS
- **Libraries:** PyTorch, Django, PySpark, Pandas, NumPy, OpenCV, Matplotlib, Scikit, SQLAlchemy, Flask, Flutter, FastAI
- **Tools:** Docker, Compose, Kubernetes, PostgreSQL, Redis, Sentry, Git
- **Cloud:** GCP, Heroku, AWS

EXPERIENCE

- **Brave Orbit** Capetown, South Africa
Full Stack Developer Jan. 2020 - Aug. 2021
 - Re-Built a healthcare app into a cross-platform mobile application using Flutter, improved performance by 40%
 - Designed & developed HIPAA compliant scalable push notification service leveraging Cloud Tasks & Firebase Messaging
 - Medication reminder/interactions service was built using Django; NIH and MPR APIs are used to fetch interactions
 - Developed a clinical surveying platform that sends out email and SMS alerts to patients and collects feedback periodically
 - Built a ERP system using Django, custom features such as multi-product substitutions, combo-products are developed
 - Kubernetes CI/CD workflows were setup on GitLab to test, build and deploy API's on cloud
 - Oversaw a couple projects and served as a mentor to junior developers. A custom ERP system project that I led helped a supermarket sustain 5X surge during the COVID-19 epidemic
- **Accenture** Bangalore, India
Advanced Application Engineering Analyst Sep. 2018 - Dec. 2019
 - Redshift PL/SQL procedures were used to generate drug material hierarchies from huge volumes of drug life cycle data
 - Performed trend analysis on drug potency data using PySpark on a EMR cluster to forecast potential raw materials affecting the drug quality. Several statistical measures are performed and colour coded control charts are visualised on spotfire
 - Designed and developed 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
 - Created dataset and trained SVM with gaussian kernel to identify cargo type; estimated size of lease area using computer vision techniques

RELEVANT PROJECTS

- **Smart Broker — Deep/Reinforcement Learning, Computer Vision**
 - Designed custom OpenAI gym environment for crypto trading, trained on visual technical indicators like RSI, MACD
 - Applied LSTM chained with CNN as function approximators to Actor Critic algorithms; 10% returns on intraday market was achieved
- **Vehicle Health Inspector — Computer Vision, Deep Learning** [link](#)
 - Trained segmentation model to detect damage and calculate health score; Deployed model as a REST API on GCP
- **DeepJet Autonomous Car — Deep/Reinforcement Learning, App Dev, Backend** [link](#)
 - Assembled the car with Jetson Nano; Cross-platform mobile app was build using Flutter to control the bot remotely
 - Implemented WebSockets to exchange sensor data with the controller; Applying RL/DL algorithms to make it autonomous
- **Mask Detection REST API — Deep Learning, Backend** [link](#)
 - Annotate mask dataset and fine tune ResNet model; Expose trained model as API and deployed using docker on Cloud Run

THESIS

- **Gender Classification Using CNN under Dr. Dakshina Ranjan Kisku**
 - Implemented Gil Levi and Tal Hassner's deep neural network architecture in PyTorch, tweaked the network layout, and evaluated various second-order optimisation techniques