Harshit Gupta

|| in : guptah-harshit

Education

IIT Kanpur

MTech, CSE | CPI: 9.14 2018 - 2020

G.B.Pant Engg. College

BTech, CSE | 79.3% 2014 - 2018

Modern School, Rishikesh ISC (SSC) | 93.75 % 2014

Modern School, Rishikesh ICSE (HSC) | 93.6 % 2012

Skills

Programming Languages:

- •Java •C •C++
- •Python •C#
- •Kotlin •Dart

Technologies:

- UWP App Development
- Android App Development
- REST APIs Azure
- OpenCVPyTorch
- LateX

Research

Explainable Anomaly Detection Jul, 2019 - Jun, 2020

MTech Thesis | Dr. Arnab Bhattacharya

- Devised a way to explain anomalies detected by autoencoders.
- We used Anchors to explain the anomalies.
- Explanations were rule-based and intuitive.

Achievements/Awards

- Academic Excellence Award 2018 from IIT Kanpur.
- AIR 111 in GATE CS 2018.
- Secured Rank 139 in Round 1 and Rank 44 in Round 2 of Codevita 2017 organized by Tata Consultancy Services among 99,473 participants.

Interests

- Standup comedy
- Poetry
- Badminton

Experience

Microsoft July, 2020 - Present

Software Engineer | Surface Apps & Experiences | Hyderabad, India

- Starting from scratch, enabled cross-device communication between devices over cloud to show real-time information of all devices connected to User's
- Designed, developed and deployed a cloud service(REST) that enables users to know the information and current state of their other devices.
- The APIs in cloud service have more than 10 million active users and are able to handle over 5000 requests per second in the initial stage.
- Added support for our own cloud service in UWP, Android and Flutter application backend.
- Handled security and privacy by adding authentication, authorization and keeping the data encrypted on server.

IBM Research India

March, 2020 - May, 2020

Research Intern | IBM Research AI | Bangalore, India

- Worked on detecting anomalies and explaining the anomalies.
- Used SHAP, Anchors, Gradients to explain anomalies treating the detection system as black-box.

Projects

Teams++

July, 2021 - July, 2021

FHL Hackathon | Microsoft E+D

• Added features to Microsoft teams like Video tagging, Object Focus mode, filters (like glasses, beard, etc.) using OpenCV.

Cross Device Communication using Signal R May, 2021 - May, 2021 FHL Hackathon | Microsoft E+D

• Used Signal R to create a cross-platform service that enables devices to share updates, send messages and control settings (volume, brightness, etc) for other devices belonging to the same user.

Non-parametric Bayesian Models - Clustering Jan, 2019 - Apr, 2019 Probabilistic Modelling and Inference | Asst. Prof. Piyush Rai

- Implemented Non-parametric version of Gaussian Mixture models(GMM).
- Dirichlet Process is used to learn the number of clusters/mixtures as well as the parameters of each Gaussian Distribution from the data.

Secure Cloud Storage

Jan, 2019 - Apr, 2019

Computer Systems Security | Asst. Prof. Pramod Subramanyan

- Designed architecture of a cloud file storage that works even on malicious server.
- Implemented in Golang, also supports basic functionalities like adding users, login, creating a file, updating a file, sharing a file and revoking access.

Evaluation of ML Classification Methods Aug, 2018 - Nov, 2018 Introduction to Machine Learning | Asst. Prof. Piyush Rai

- Compared performance of various ML classification methods on MNIST dataset.
- Methods compared: K-Nearest Neighbors, Decision Trees, Random Forests, Linear & Kernelized SVM, Feedforward NN, CNNs, Softmax Regression.

Collaborative Whiteboard

Sept, 2018 - Nov, 2018

Topics in Distributed Systems | Prof. R. K. Ghosh

- Application where multiple users share same canvas on different screens.
- •The main challenge was to maintain consistency across multiple canvas.
- Java's Remote Method Invocation(RMI) was used for transfer of data.