

AYUSH GARG

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EXPERIENCE

Data Scientist, HP Inc (R&D)

📅 Sep 2018 – Jul 2021

📍 Bangalore, India

MLOps

📅 April 2021– July 2021

- Created framework to standardize ML projects to code, data and models reuse across teams
- Modularized parts of ML pipeline capable of running on different h/w independently
- Provided interfaces for the modules and abstracted out the event, data and artifact logging
- Resulted in cohesive projects that can borrow from each other while increasing maintainability

Predifix

📅 Oct 2018 – July 2021

🔧 PyTorch, pandas, numpy

- Tool to guide Customer Support agents for faster resolution of printer/PC related issues
- Used Long Short Term Memory (LSTM) based Deep Neural Network (DNN) to train a model on 200K tickets
- Helped reduce Average Handling Time by approx 27%

Software Engineer, Centurylink

📅 Aug 2015 – Sep 2018

📍 Bangalore, India

DeepAssist

📅 Aug 2017 – Aug 2018

🔧 Tensorflow, Numpy, Flask, NLTK, MySQL, AngularJS

- Recommendation engine to increase the efficiency of Ticketing system (*Ticket=issue raised by end user*) by suggesting steps for ticket resolution
- Used Attention based LSTMs to determine ticket context and recommend the most appropriate steps by training on historical tickets
- Model reached an accuracy of about 83%

RESEARCH

Vespid - FaaS platform to host Vertines

📅 Oct 2021-Present

📍 Illinois Tech

- Vertines - abstraction to allow individual functions to run in lightweight, virtual environment
- Created a platform, Vespid, that manages the lifecycle of Vertines and provides CLI and GUI to interact with the serverless functions
- Vespid is 30 times faster than OpenWhisk standalone tool
- Selected for EuroSys'22 Conference
- <https://github.com/virtines/vespid>

Hate-Speech Detection Using Weak Social Supervision

📅 Dec 2020

📍 Illinois Tech

- Text based classification engine to identify hate-speech for social media networks using Weak Social Supervision
- Weak features (likes, comments) generated for unlabeled data supervise the classification of labelled data
- Trained a BertClassification model on Twitter Hate Speech dataset
- With supervision, the f1 score increased by 8%

EDUCATION

Master's in Computer Science

Illinois Institute of Technology, Chicago, US

📅 Spring 2022

📊 4.0/4.0

- Courses Taken: Adv Database Adv OS Cloud Computing Serverless Computing S/W Architecture Adv Algo
- TA for OS and Online Social Network Analysis

B.Tech in Electronics & Comm Engg

Delhi Technological University, Delhi, India

📅 Spring 2015

📊 3.5/4.0

- Organized Student Interest Groups & IEEE Students' Branch activities and taught at workshops
- Organizing Member in DTU Tech Fest

SKILLS

Python Pytorch Tensorflow 1.0
Pandas Jupyter JIRA Git MySQL
MongoDB Serverless Computing
Data Structures Parallel File System
Distributed File System System Design
BERT Transformer NLP

ACHIEVEMENTS

® **Patent-pending**
Machine Learning Based Determination of Troubleshooting Routes Dependent on Product Feature- PCT/US2020/018268

📄 **Paper Presentation - EuroSys'22**
"Isolating Functions at the Hardware Limit with Virtines"
<https://arxiv.org/abs/2104.11324>

📄 **Paper Presentation**
"Learning optimal navigation algorithms from customer support case notes" in DSKD (Data Science Conference, HP)-2019

📄 **Paper Presentation**
"Extracting resolution steps from the unstructured logs" in DSKD (Data Science Conference, HP)-2019

🏆 **AngelHack**
Won Hypertrack challenge at AngelHack Bangalore Hackathon 2018
<https://www.hackathon.io/trek-o-hun1>

HOBBIES

