

AMIT KUMAR

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EDUCATION

- 1. University of Southern California, Los Angeles** (GPA: 3.6/4) Dec 2019
Masters of Science - Computer Science.
- 2. Army Institute of Technology, Pune, India** May 2016
Bachelor of Engineering (Computer Science and Engineering)

WORK EXPERIENCE

- 1. Workday Inc. | Machine Learning Engineer Intern | San Francisco** May 2019 - Present
 - Working on improving the word embeddings by utilizing the contextual information of the words and comparing the performance of different frameworks like BERT, XLNet, FastText, ElMo, Word2Vec, etc. on downstream ML models.
- 2. USC, Chan Division of Occupational Science | Research Assistant | Los Angeles** Feb 2018 - Mar 2019
 - Developed and deployed backend servers(Rails, Java Spring) and frontend (ReactJS, Javascript, HTML) web applications on AWS as dockerized services.
 - Built data pre-processing and ETL pipelines for different machine learning models and applications.
- 3. MavenHive Technologies, Bangalore, India | Software Development Engineer** Jan 2017 – Dec 2017
 - Worked in the GoFood team of [GoJek](#) -Largest online food ordering platform in Indonesia (600k orders/day).
 - Improved the **response time** of RESTful APIs from **110ms to 35ms**. Maintained multiple micro-services.
 - Deployed live backend systems using techniques like Canary deployment, Blue-Green deployment using HAProxy for load balancing during deployments, database migrations, application versioning, etc.
- 4. Commvault, Hyderabad, India | Software Development Engineer** Dec 2015– Jan 2017
 - Built algorithm to download update packages in accordance with dependency graph for Windows and Linux installers.
 - Built multi-threaded application in Python to compile all the binaries and package them into a single executable.
- 5. GS Labs, Pune, India | Software Developer Intern** Jan 2015 – Dec 2015
 - Led and developed “Resource Monitoring of Docker Containers (Restful API)” ([Github](#))
 - Used HighCharts to plot live dashboards showing the live CPU/Memory/Network usage by containers.

TECHNICAL SKILLS

- Languages** : Python, Java, ReactJS, Ruby On Rails, Javascript, C\C++, HTML, CSS
- Tools** : Docker, AWS (EC2, S3, RDS, Fargate), Gitlab CI/CD, Flask, Pandas, Keras, Hadoop, Spark
- Databases** : Postgres, MySQL, SQLite, MongoDB, Firebase

PROJECTS

- 1. Tech Conference ([Github](#))([Live Demo](#)) | Rest APIs, Postgres, Web Scraping, Python, HTML, Javascript** Feb 2017
 - Deployed a Web Service which sends Slack notifications of any upcoming conferences in your region.
 - Developed REST APIs(Rails) and a frontend for listing and adding new conferences and Postgres to store user information.
 - Built a web and twitter crawler in Python, which periodically checks for any new information about upcoming conferences.
- 2. MovieRec - A Recommendation System ([Github](#)) ([Demo](#)) | Machine Learning, Docker, Postgres, Python** Mar 2019
 - Used Spark to parallelize the Alternating Least Square algorithm for recommending new movies to users.
 - Made use of MovieLens 20 Million rating dataset. Also created an inverting index using Elasticsearch for fuzzy searching.
- 3. Docker Container’s Resource Monitoring ([Github](#)) | Javascript, MongoDB, Python, Html, HighCharts** May 2018
 - Developed a centralized server with interactive real-time dashboards to monitor usage of RAM, CPU, I/O by a docker container.
 - Designed the RESTful APIs using Python Flask, interactive graphs using HighCharts.js.
 - Employed MongoDB to store the historical data of Docker containers.
- 4. Secure Logging-as-a-Service in Cloud ([Github](#)) | Javascript, Public/Private Key Encryption, HTML, Python** Dec 2015
 - Calculated Hash chains of logs using Public/Private key encryption techniques to securely store logs generated in the cloud.
 - Built this system even before blockchain technology became popular.
 - Made use of Bloom filters for fast lookup.
- 5. Self Driving Car Convolutional Neural Network ([Github](#)) | Tensorflow, CNNs, Machine Learning** June 2018
 - Created a Convolutional Neural Network using Tensorflow to determine the angle of rotation of the steering wheel of an autonomous self-driving car. The model takes in the live video feed from the front view of the vehicle and can determine the angle by which the steering wheel should be rotated to follow the driving instructions.

ACCOMPLISHMENTS

- Pipeline for Analyzing Lesions after Stroke (PALS). Published at [Frontiers in Neuroinformatics](#).
- Published a research paper on Resource Monitoring Of Docker Containers.
- Google Play developer account holder and published more than 10 Android applications with over 200,000 application downloads on the Google Play store. Also, designed my own personal blog at <https://amitasviper.github.io/>