Reshav Abraham

Full Stack ML Engineer

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about me

I am a passionate software engineer interested in Full stack development and machine learning. I have experience building backend API's and Frontends. I also have experience in training and serving machine learning models.

Work Experience

Nlmatics

NLP Engineer

New York, NY — October 2019 - April 2021

Early Stage Startup Company that specialized in search and retrieval from unstructured text data. It enabled users to perform search qeries on digital data such as pdf/html/text to extract specific information. The product is built in python, swagger api (OpenApi 3.0.0) and served with gunicorn. The frontend was implemented with React and ANTD. It was containerized with Docker and deployed with kubernetes, It is hosted on gcp and azure.

* Developed service to index pdf documents with high fidelity. Tested with multiple document layout analysis algorithms to improve the performance of pdf indexing. Improved reliability of header, paragraph, and table classification from unstructured text. This helped improve the search quality of the product.

* Lead on-prem installation for clients and deploying on restrictive environments. Prepared installation by simulating client environment. Customized the deployment to support the client environment. Designed deployment scripts for regular updates and roll-outs.

* Designed and Implemented a Search Flagging/Approval System to track dips and improvements in search quality.

* Designed back-end APIs with Python and Swagger.

* Built out front-end features with React and ANTD.

* Maintained and debugged CI/CD pipelines, with Docker and Kubernetes.

Dell EMC

Software Intern

Charlotte, NC — May 2017 — August 2017

* Optimized memory usage for enterprise data pipelining software by modeling a regression on real-time memory consumption data using Apache Spark.

Projects

Human Voice Detection

* Developed a neural network architecture using CNN and linear layers for processing audio signals to identify human voices.

* Developed a script for scraping audio from YouTube playlists.

* Utilized MFCC and other signal processing techniques to prepare data.

Technical Skills

Languages Python, JavaScript, Bash, C++, Java

Frameworks PyTorch, Tensorflow, Swagger, React

DevOps Docker, Kubernetes, Nginx

Cloud GCP, Azure

Databases MongoDB, Postgress, Redis

Markup LaTeX, HTML, CSS, Markdown

Misc Git, Linux, Clubhouse, Jira, Jupyter

Education

B.S Computer Engineering
Purdue University

West Lafayette, Indiana 2014 — 2018

Multi-core Processor System Verilog

* Implemented a synthesizable multi-core processor for processing MIPS assembly language in SystemVerilog.

Automated Nerf-Gun Turret

* Engineered a turret gun that detects human targets and shoots Nerf darts at them.

* Implemented human-target detection with MobileNetSSD and OpenCV.

Certificates

Natural Language Processing with Deep Learning
Stanford University, CS224N
October 2020 — December 2020

* Developed a Neural Machine Language Translation model in PyTorch.

* Implemented encoder and decoder networks using LSTM and CNN layers for processing out-of-vocabulary words.

Interests

* Soccer

* Guitar

* Chess