(720)736-0053
Boulder, Colorado

# Aravindakumar V M

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GitHub:
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## Work Experience

**Software Engineer Intern** **May 2022 — Aug 2022**
*Viasat Inc* *Carlsbad, CA*

- Identified the key performance metrics to be tracked for several test scripts of the Fixed Terminal Automation team.
- Developed Metrics Library in SAM automation framework, in Python, for collecting the performance metrics and pushing to Druid database.
- Built dashboards using Grafana which facilitated efficient visual analysis of daily test runs.
- Configured slack alerts in Grafana which helps in instant anamoly detection.

**Software Engineer** **Aug 2020 — Jul 2021**
*Zomentum* *Bangalore, India*

- Developed and maintained data integration API's for a third-party PSA tool called Connectwise Manage.
- Streamlined Git-Lab workflows which eased the deployment process.
- Participated in weekly bug triage sessions which made the application robust.
- Contributed to the rule discovery phase for the integration of a payment gateway called Stripe with Zomentum.

**Software Engineer** **Jun 2018 — Apr 2020**
*Soroco India Pvt Ltd* *Bangalore, India*

- Created Offer Letter Bot to automate the process of generating offer letters which saved time for the HR team.
- Built several scalable and fault tolerant end to end process automation systems in Python for an insurance firm.
- Wrote a configurable python script for Synthetic Data Generation which generated data for testing new features in Scout.
- Built an automation system for the Fin-Ops team of a client which handles sensitive user permission data from multiple sources like RDS, Red-shift, S3 buckets etc., where, I gained knowledge on using design patterns like Singleton and Factory methods.
- Worked with the Input engine team which uses Machine Learning to parse PDF files.
- Developed back-end API's in Django for a client specific dashboard that fetched data from Amazon S3, RDS and several other client specific endpoints.

## Research Work

**Brain Tumor Segmentation (BraTS)** **Spring 2022**
*Independent Study - Advised by Dr. Geena Kim* *Boulder, CO*

- Explored novel architectures and approaches for efficiently segmenting brain tumors as a part of BraTS challenge.
- Modularized existing code base to support easy integration of new approaches.
- In depth analysis of why existing approach using Deep InfoMax was not able to achieve better results in comparison with a standard U-net based architecture.
- Explored Deep Medic and 3D-Unet architectures for segmentation tasks.
- Implemented multi-scale dense U-net (MDU-net) architecture which was able to achieve promising results.

## Projects

**Music Generation** **Spring 2022**
*CSCI 5922 - Neural Networks & Deep Learning* *Boulder, CO*

- Performed a comparative study on the quality of music generated by different deep learning models like RNN, LSTM, GRU and Distill-GPT2 with over **1000** musical notes(ABC notation) obtained from Nottingham music database.
- Batch pre-processing was done for the RNN variants, which retained the sequential information in the input.

**Sudoku Solver** **Fall 2021**
*CSCI 5622 - Machine Learning* *Boulder, CO*

- Developed a Convolutional Neural Network model that solves a 9x9 Sudoku puzzle one cell at a time with an accuracy of 100%

**Netflix Movie Recommender** **Fall 2021**
*CSCI 5502 - Data Mining* *Boulder, CO*

- Built recommender system using Netflix Prize dataset consisting of 50k users, 5k movies with several baseline models like Surprise KNN, SVD++, SVD, Surprise Baseline and final model as XgBoost regressor and obtained a RMSE score of **0.9**.

**Quora Question Pair Similarity**

- Applied various feature engineering techniques to get 15 handcrafted features and tf-idf weighted Word2Vec representation for the question pairs.
- Implemented various classification models to predict the similarity of **400k** question pairs and obtained a log loss of **0.40**

## Education

**Master of Science in Computer Science**, *University of Colorado Boulder* **CGPA 3.92** Aug 2021 - Present
**Bachelor of Engineering in Computer Science**, *Coimbatore Institute of Technology.* **CGPA 9.04** Jul 2014 - May 2018

## Course Work

Machine Learning, NLP, Data Mining, Linear Programming, Neural Networks and Deep Learning, Theoretical Foundations of Autonomous Systems*

## Skills

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|---|---|
| **Programming Languages** | Python, Scala, C/C++ |
| **Databases** | PostGreSQL, MongoDB, Druid |
| **Frameworks** | Django, Play |
| **Technology** | Git, AWS, Jenkins, Grafana |

## CertiFications

- Scala and Functional programming for beginners.
- Advanced Scala and Functional Programming.

## Achievements

Received Outstanding Teaching Assistant award for my contributions in CSCI 3155
Secretary of National Service Scheme Club in CIT
Event Manager of a technical symposium named Interface'16
Bestowed with Best Student Teacher Award