
EDUCATION**University of Colorado Boulder**

Boulder, CO

*Master of Science in Computer Science; CGPA:4/4**Aug 2019 – May 2021*

- *Worked with Prof. Chenhao Tan on style transfer in text.*

*Graduate Teaching Assistant for CSCI 1300 - Computer Science 1: Starting Computing***Rashtreeya Vidyalyaya College of Engineering**

Bangalore, India

- *Bachelor of Engineering in Computer Science and Engineering; CGPA: 9.45/10.0* *Aug 2013 – May 2017*

RELEVANT COURSEWORK

- **University of Colorado Boulder:** Design and Analysis of Algorithms, Machine Learning, Neural Networks and Deep Learning, Object-oriented Analysis and Design, Datacenter Scale Computing.
- **Rashtreeya Vidyalyaya College of Engineering:** Data Structures, Algorithms, Software Engineering, Introduction to Machine Learning, Engineering Maths, Linear Algebra, Data Warehousing and Mining, Database Management System, System Software and Compiler Design, Theory of Computation.

TECHNICAL SKILLS

- **Languages & Frameworks:** Java, Python, C++, JavaScript, C, TypeScript, HTML, CSS, Node.js, Angular, Spring Boot, Flask, Express.js, Hadoop, Apache Spark.
- **Databases:** Elasticsearch, NoSQL, Relational DB (MySQL, PostgreSQL), Document DB (MongoDB), Columnar DB (Cassandra), Graph DB (Neo4J).
- **Tools & Libraries:** Containerisation, Container Orchestration (Kubernetes, Docker swarm), IAM (Keycloak), gRPC, Kafka, ELK, Nginx, Electron.js, Socket.io, Shell scripting, Prometheus, Grafana, GCP, PyTorch, Rasa.

EXPERIENCE**Aruba Networks**

Santa Clara, CA

- *Software Engineer Intern*

May 2020 - Aug 2020

- **Distributed Logging (Aruba Cloud Platform):** Developed & orchestrated a pull-based logging service (Python via containers) to collect & transform logs of all microservices to ES. (ELK, Retool, Flask, Kubernetes)

Infosys (Expert Track)

Bangalore, India

- *Specialist Programmer*

July 2017 - July 2019

- **Natural language to CQL:** Enhanced a Python module to translate natural language queries into CQL (Cypher Query Language) queries, improving its accuracy by 22%, using NLP techniques. (Python, Rasa, Flask)
- **Performance management system:** Led the end-to-end development and deployment of an organization performance visualization app that provided a holistic view & actionable insights for leaders to enhance the performance of multiple teams. (Published in ACM IUI 2018. [Link](#)) (Node.js, MongoDB, JS, D3.js)
- **Telemetry library:** Implemented an Angular library based on the Sunbird telemetry specification ([link](#)), for capturing telemetry data in web apps. Used by more than 10 applications of Infosys. (Angular, JS)
- **Employee experience application:** Developed and maintained complex coexisting systems over a cloud infrastructure with Docker Swarm, by containerizing individual applications & tools. Developed a monitoring & alerting system with Prometheus & Grafana. (Docker, Docker Swarm, Shell scripting)

Infosys (Expert Track)

Bangalore, India

- *Intern*

Jan 2017 - Jun 2017

- **Key performers identification:** Analyzed the connectivity structure of the organizational data using community detection & network science metrics, helping business leaders in better management of teams. (Java, Neo4J, JS)
- **Knowledge graph:** Modeled and developed a knowledge graph for an internal Question-Answering platform at Infosys, thereby improving the email notifications algorithm for questions posted. (Neo4J, Spring boot)

Mathologic Technologies

Bangalore, India

- *Intern*

Jun 2015 - July 2015

- **CrewLogic:** Designed & implemented heuristics to automate the crew assignments for scheduled trains, improving 28% in the output & saving 22% crews for Indian Railways. (Java, MySQL)

ACADEMIC PROJECTS

- **Scrammer (*code*)**: App to scan handwritten text documents and make them searchable through Elasticsearch. Also provided grammatical suggestions using Grammarbot API. (Python, React.js, GCP, ES, Kafka)
- **Clipboard synchronization app (*code*)**: Solution for copying clipboard texts from one device to all other devices of users. (Node.js, MongoDB, GCP, Electron.js, Keycloak, Android)
- **Negation in negative reviews (*code*)**: Performed lexical analysis of various datasets and found that negative reviews have more negations than positive reviews. Discussed its implications on downstream NLP tasks such as sentiment analysis.
- **Style transfer on Tweets (*code*)**: Implemented and tuned the Cross-alignment style transfer model using twitter data, to translate an input tweet to a better worded tweet with the same content.
- **Event sequence prediction (*code*)**: Implemented an LSTM based model for event sequence prediction on Twitter and Hawkes data and analyzed its performance (NLL Loss) in comparison with the Neural Hawkes model.
- **non-normal RNN (*code*)**: Performed hyperparameter explorations and ablation studies of nnRNNs. Implemented the Adding task for measuring the performance of nnRNNs against other RNN architectures. (Python, PyTorch)
- **One pass macroprocessor for 8086 (*code*)**: Implemented an one-pass macroprocessor for 8086 processor using lex and yacc, which could replace MACROs (including nested MACROs) and constants with the corresponding group of statements.

CERTIFICATIONS

- Deep Learning Specialization by Coursera (deeplearning.ai), August 2018 (*link*).

PUBLICATIONS

- Gopalakrishnan, Gopakumar, **Aithal, Madhusudhan M.**, Pasala, Anjaneyulu (2018). Visual Analytics of Organizational Performance Network. Proceedings of the 23rd International Conference on Intelligent User Interfaces Companion. (*link*)