Ramakrishnan Sundareswaran

515-708-7555 | ramkris@iastate.edu | linkedin.com/in/sramakrishnan247 | https://sramakrishnan247.github.io/portfolio/

EDUCATION

Iowa State University Ames, IA
MS in Computer Science, GPA: 4.0 *Jan 2020 – Dec 2021*

University of Calicut Thrissur, India
BS in Computer Science, GPA: 8.36/10 *Aug. 2014 – May 2018*

EXPERIENCE

Software Engineer Aug 2018 – Oct 2019
ECI Telecom *Bengaluru, India*
- Coded, documented, unit tested and delivered high quality software for ECI's Neptune Product.
- Implemented robust and scalable distributed applications for high-volume performance in C++ and Python.
- Developed an API that parsed XML/JSON requests and executed RPCs for configuring network elements.
- Integrated a third party framework with ECI's Neptune product to support operations that would not affect the network element's configuration data store; incorporated two-phase commit protocol while writing data.

Graduate Student Researcher May 2020 – Aug 2020
Computational Media Lab *Ames, IA, United States*
- Performed data pre-processing and feature engineering on the VISEM dataset using OpenCV.
- Implemented an end-to-end machine learning pipeline with a CNN backbone architecture using Tensorflow.

Graduate Teaching Assistant Jan 2020 – Present
Iowa State University *Ames, IA, United States*
- Lead Teaching assistant(1 out of 3) for COMS 113 at Iowa State University (1200 students).
- Responsible for conducting live labs, grading exams, assisting other TAs and managing the course website.

PROJECTS

Puffin: A web app to test your English language skills | *Python, Flask, Tensorflow, AWS* Nov-Dec 2020
- Developed a Reading Comprehension game that uses a BERT based neural network for evaluating answers.
- Implemented REST APIs using Flask, developed a responsive web app and deployed it using AWS.

Map-Reduce Framework | *C++, Python, OpenMP* Oct-Nov 2020
- Implemented a Map-Reduce Framework in C++ with multi-threading support for a shared memory model.
- Performed profiling for the word count problem and observed a 60 sec speedup for the Gutenberg dataset.

ProveMe: A Theorem Prover for Propositional Logic | *Java, JUnit* Oct 2020
- Developed a software to check the validity of statements given a propositional logic knowledge base.
- Implemented syntax parsing, postfix conversion, expression tree construction and propositional logic resolution.

Checkers Playing Agent | *Java, JUnit* Aug 2020
- Designed an interactive Checkers game utilizing Object Oriented Programming principles in Java.
- Implemented the minimax algorithm with alpha-beta pruning for the agent gameplay.

Fast Neural Style Transfer | *Python, OpenCV, Tensorflow, Keras, Numpy, Pandas* Apr-May 2020
- Implemented Johnson et al's paper to perform Neural Style Transfer using Tensorflow and Keras.
- Performed optimizations for video frames and extended the concept for fast stylizing to real time videos.

News Classifier App | *Python, Pandas* Feb 2020
- Developed a Machine Learning based News Classifier trained on the 20 Newsgroups dataset.
- Implemented the Multinomial Naive Bayes algorithm with laplace smoothing from scratch.

Parking Management System | *Django, MySQL, Bootstrap, HTML, CSS, JavaScript* Jan-May 2016
- Developed a CRUD web app for parking management.
- Incorporated support for navigation using Maps API and payments using Instamojo's Payments API.

TECHNICAL SKILLS

Languages: Python, Java, C/C++, SQL (MySQL), JavaScript, HTML/CSS
Frameworks: Flask, Tensorflow, OpenCV, Node.js