

Ramakrishnan Sundareswaran

EDUCATION

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- Jan 2020 - **Master of Science | Computer Science**
Dec 2021 Iowa State University, Ames, IA, United States | Graduate Scholarship Recipient *GPA - 4.0/4.0*
Coursework: Algorithms, Machine Learning, Deep Learning, Computer Vision, Artificial Intelligence, Concurrent Systems
- Aug 2014 - **Bachelor of Science | Computer Science**
May 2018 University of Calicut, India | Awards: Certificate of Excellence for Academic achievements. *GPA - 8.36/10*
Coursework: Data Structures, Algorithms, OOP, Databases, Networks, OS, Distributed Systems, Web Development

TECHNICAL SKILLS

Programming: Python, Java, C++, C, SQL, HTML, CSS, Javascript, MATLAB

Frameworks/Tools: Django, Flask, React.js, Node.js, Bootstrap, Tensorflow, PyTorch, OpenMP, Scikit-learn, Linux, Git, Docker, Vim, MySQL

WORK EXPERIENCE

- Aug 2018 - **ECI Telecom | Software Engineer** - Bengaluru, India
Oct 2019
 - o Coded, Documented, Unit Tested and delivered high quality software for ECI's Neptune Product.
 - o Implemented robust and scalable distributed applications for high-volume performance in C++ and Python.
 - o Learned more about client-server architecture, multi-threading, request/response cycle and networking.
 - o Designed APIs for new features, performed code-reviews, fixed bugs and mentored interns.
 - o Used tools such as Docker, JIRA, Bitbucket, CMake, Confluence, Visual Studio, Vim, Shell, GDB.
- May 2020 - **Computational Media Lab | Graduate Student Researcher** - Ames, IA, United States
Aug 2020
 - o Conducted research for improving class distribution estimation in computer vision.
 - o Performed data pre-processing and feature engineering on the VISEM dataset using OpenCV.
 - o Implemented an end-to-end machine learning pipeline with a CNN/LSTM backbone architecture.
 - o Used tools/frameworks such as Tensorflow, Numpy, Pandas, OpenCV, Shell, MS Excel, Matplotlib.
- Jan 2020 - **Iowa State University | Graduate Teaching Assistant** - Ames, IA, United States
Present
 - o Lead Teaching assistant(1 out of 3) for COMS 113 at Iowa State University (1200 students).
 - o Responsible for conducting live labs, grading exams, assisting other TAs and managing the course website.

PROJECTS

- Nov 2020 **Map-Reduce Framework**
 - o Implemented a MapReduce Framework from scratch in C++ with multi-core support for parallel performance.
- Oct 2020 **ProveMe: A Theorem Prover for Propositional Logic**
 - o Implemented syntax parsing, expression tree construction and propositional logic resolution in Java.
- Aug 2020 **Checkers Playing Agent**
 - o Designed an interactive Checkers game utilizing Object Oriented Programming principles in Java.
 - o Implemented the minimax algorithm with alpha-beta pruning for the agent gameplay.
- Apr-May 2020 **Fast Neural Style Transfer**
 - o Implemented Neural Style Transfer and added optimizations for parallel processing of video-frames.
- Feb 2020 **News Classifier**
 - o Developed a Machine Learning based News Classifier trained on the 20 Newsgroups dataset.
 - o Implemented the Multinomial Naive Bayes algorithm from scratch in Python.
- May - June 2018 **Housing Price Prediction App**
 - o Performed feature extraction and Decision Tree regression on the Boston Housing dataset.
 - o Developed a web-application to predict prices for new data using Flask and deployed the model on Heroku.
- Aug '17 - Apr '18 **Intelligent CPU Scheduler**
 - o Implemented a Custom Scheduler which achieved 5% reduction in the Net Turnaround time.
 - o Performed time-slice prediction based on outputs from K-Nearest Neighbor and decision tree algorithms.
- Jan -May 2016 **Parking Management System**
 - o Developed a web app for a parking management as a part of the Junior Year undergraduate project.
 - o Server-side(Django), Database(MySQL), Front-end(Bootstrap with Vanilla JS), Maps and Instamojo APIs.