Sreenivas Krishna Nair

https://www.sreeuwmadison.com

110 N Bedford St, Madison, WI 53703
(608)-886-3442, snair25@wisc.edu

Education

University of Wisconsin-Madison.
B.S. Computer Engineering, expected Dec 2022
B.S. Computer Science, expected Dec 2022

- **Major GPA 3.75/4.0,** cumulative GPA 3.67/4.0
- Dean's Honors List

Stanford University
Summer Session, summer 2019

- Course work in linear Algebra and multivariable calculus
- Silicon Valley Innovation Academy (SVIA)

Professional Experience and Projects

Dell Technologies
Firmware Engineering Intern **Summer, 2022**
Worked alongside Dell associates in the Kernel-Baseboard Management Controller (BMC) office of ISG on the Study Group Project for Distributed Machine Learning on Dell Remote Access Controllers (iDRACs) for ransomware detection on servers. Built the ML distribution framework of the project. The framework allowed iDRACs to share ML ransomware detection tasks amongst each other therefore speed up overall detection and reduced load on each iDRAC. Learned embedded Linux - YOCTO, bitbaking, and Message Passing Interface (MPI) in a limited time frame.
Software Engineering Intern, Campus Ambassador **Summer, 2021**
Intern: Worked alongside Dell associates in an Agile Kanban workflow setting in the Shared Component Office (SCO) of the Infrastructure Solutions Group (ISG). Built the JIRA Integration infrastructure for the SCO portal. It drastically reduced manual labor, eliminated data inconsistencies, and sped up Shared Intellectual Property (SIP) identification throughout DELL/EMC. Got real world Git/Gerrit experience and learned Functional programming and unbundled databases in a limited time frame.

WIsconsin WIreless and NetworkinG Systems (WiNGS) Lab, UW – Madison
Undergraduate Researcher – Machine Learning/Computer Vision **September 2021 – December 2021**
Worked under Prof. Suman Banerjee and R.A. Lance Hartung on the EasyVizAR project – to provide Edge supported, secure AR (Augmented Reality) system for emergency response crews. Implemented an Unet inspired neural network for multi-class semantic segmentation, object recognition and object co-detection. NN achieved high accuracy.
Undergraduate Researcher – Robotics **January 2022 – May 2022**
Worked under Prof. Suman Banerjee and R.A. Joshua Tabor on the Autonomous Vehicle Testbed project. Implemented path following algorithm that instructs drivetrain how to follow the path created by path generation algorithm. The Testbed achieved robust path following on uncertain terrain/edge cases. Learned Robot Operating System (ROS) and simulation tools.

Wisconsin Robotics
Member of AI Team
Implemented Computer vision algorithm and High-Level algorithm in ROS (robot operating System) for rover competing in the university Rover competition. Algorithms help rover in obstacle detection, path finding and image recognition.

Social Network
Full stack web platform that models social media platforms. Uses the MERN stack model to organize the platform. Full social media user experience with user-to-user chat, cookies, sessions, user to global feed, role-based access control (RBAC), level 6 security, data protection, location tracking, etc. (under dev)

Lane Detection
Algorithm for detecting lanes in any image or video. Uses python and OpenCV library to achieve functionality. Algorithm breaks down each frame into greyscale, smoothens image, uses Hough Transforms for rendering edges and averages out and demarcates lanes.

Farm Data – Analyzer
Java application for conducting analysis on the milk data for several farms across the US. The application takes in milk production data of several farms as a CSV file and conducts analytics. It displays yield, tracks change across time and generates various reports and graphs for visual data analytics.

Skills

Programming Languages: **P**ython (proficient), Java (proficient), JavaScript (proficient), Clojure (proficient), C (proficient), C++, SQL, R, Dart, LC3, Swift, Verilog.
Frameworks: GIT, Gerrit Code review, React.js, Express, Node, Next.js, GraphQL, ROS (Robot Operating System in C), MATLAB, Android Visual Studio, Flutter, Solid Works, Octave, Quartus, Jenkins CI/CD (intro) ,Kubernetes/docker(intro), embedded linux – YOCTO, bitbaking, Message Passing Interface (MPI), Ensemble methods in ML, pytorch, scikitlearn.
Databases: MongoDB (proficient), CruxDB (unbundled database), MySQL(introductory)
Platforms: WeKAN, JIRA, Confluence, Heroku, Vercel, Postman, NPM, Gatsby, AWS, Azure, Digital Ocean

Certifications

SQL, Stanford University (Lagunita)
The Complete 2020 Web Development Course (Udemy)
The Complete Strapi Course (Udemy)
JPMorgan Chase Software Engineering Virtual Experience (Forage)
Deep Learning Specialization, Stanford University (Andrew NG) expected-Dec2022