



SHIVA A. NEELAKANTAN

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My goal as an engineer is to advance systems in the automotive industry through emphasis on user experience and computer vision. I am seeking projects that will give me exposure to the software industry and the practices I can use to design the vehicles of tomorrow.

EDUCATION

Iowa State University of Science and Technology (Ames, IA)

Expected Graduation: **May 2023**

Bachelor of Science in Computer Science

Cumulative GPA: **3.7/4.0**

Minors in Data Science, Psychology

Skills: Python · Machine Learning · JavaScript · HTML & CSS · React JS · AWS Cloud · R · Data Visualization · Git · Regex · SQL · Java · MATLAB
SolidWorks · Figma · Spanish Fluency · Tamil Fluency

Honors: Semester Honors (4 Semesters) · Dean's List (4 Semesters) · National Honors Society (NHS) · AP Scholar with Distinction

SOFTWARE ENGINEERING

Productivity Management Software

Barrington, IL

React JS Developer

September 2021 – Present

- Developed an interactive web application using the React JS framework to organize and monitor projects, tasks, and habits
- Managed application state using custom React hooks and user interface using powerful front-end frameworks such as Bootstrap CSS to enhance application's user experience (UX)

Personal Portfolio Website

Barrington, IL

Front-end Web Developer

June 2021 – July 2021

- Deployed a static portfolio website via AWS S3 storage buckets using HTML, CSS, and JavaScript to showcase my vision and projects
- Implemented JS animations and event handling using SVG graphics and jQuery to maximize user experience and website design flow
- Optimized accessibility by emphasizing website responsiveness to account for clients' varying rendering capabilities

MACHINE LEARNING

Handwriting Recognition AI

Barrington, IL

TensorFlow Engineer

June 2021 – August 2021

- Constructed an artificial neural network via Python using logistic regression and vector calculus to predict values of handwritten images on a 28x28 pixel grid concatenated into a list of 784 neurons with 2 hidden layers
- Employed TensorFlow machine learning library to optimize mean square error calculation and model's prediction accuracy per iteration
- Generated activation diagrams using Matplotlib and Seaborn plotting libraries to monitor network's improvement over various epochs

Stock Trading AI

Ames, IA

Algorithmic Trading Club

January 2021 – March 2021

- Organized a relational database containing 100 original stock picks to monitor real-time stock prices and data via Yahoo Finance's API
- Formulated linear regression algorithms in Python to create models for predicting future trends and potential market fluctuations

LEADERSHIP EXPERIENCE

Varsity Tutors, Inc.

Virtual

Python Instructor

August 2020 – Present

- Spearheaded private tutoring courses in Python using Zoom to educate students grades 6-12 on computer science principles, ranging from string and list manipulation to algorithmic design and data science libraries
- Collaborated with parents to create tutoring sessions appropriate for students' learning styles and accommodations

Cyclone Formula Racing, Vehicle Dynamics

Ames, IA

Suspension Design Engineer

September 2019 – May 2021

- Fabricated components for Iowa State University's formula SAE team, specifically for the vehicle's suspension
- Specialized in CAD modeling of the components, leading the design aspect of the team's success
- Orchestrated various testing operations on the vehicle using MATLAB and dynamometer testing to ensure a proper equilibrium between performance and safety