Anikait Vishwanathan

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EDUCATION

California Polytechnic University San Luis Obispo — **San Luis Obispo, CA**

***B.S.** in Computer Science, **Concentration**: AI/ML* — September 2024 - June 2027

GPA: 4.0

WORK EXPERIENCE

Neurocom | *Software Developer* — October 2024 - Present

- Developing proprietary haptic feedback software for military applications, utilizing vibration cues to guide personnel toward target locations and enhance operational efficiency.
- Designing and implementing plugins to integrate haptic feedback technology into the military's ATAK software.

Hack4Impact, Cal Poly | *Software Developer* — September 2024 - Present

- Developing full stack web applications for local nonprofits, tailored to meet the unique technology needs of each organization.
- Collaborate with cross-functional teams to design, build, and deploy applications that address real-world challenges faced by nonprofits.

PROJECTS

Detecting Diabetic Retinopathy/Explainable AI | *TensorFlow/Keras, OpenCV, Saliency Maps, Python* — June 2022 - August 2022

- Utilized TensorFlow/Keras framework and preprocessed data with OpenCV to visually classify and diagnose diabetic retinopathy.
- Implemented surrogate models (decision tree, logistic regression) to explain predictions made by more complex models (CNNs) in the context of image classification of diabetic retinopathy. Furthered by using saliency maps. Refinement led to 15% improvement in accuracy.

Dynamo Chess | *TensorFlow/Keras, Pygame, Python, Jupyter* — September 2023 - Present

- Developed a comprehensive chess engine in python. Implemented a min-max algorithm, tablebases, and multiple heuristics. Utilized Chess.com and Lichess APIs to scrape game data and construct a database.
- Created model architecture to replicate online chess players' styles from game data, accurately predicting 85% of moves by analyzing and integrating heuristics for future game states.

Distracted Driving Project | *YOLO v8, CNN, VGG16, Transfer Learning, Hardware Integration* — June 2022 – Aug. 2023

- Detecting distracted driving through video processing using CNN, VGG16, RNNs, and transfer learning with YOLO v8. Created hardware, integrated on micro-processor for physical implementation of solution.
- Achieved 99% accuracy in correctly identifying distracted driving behavior and alerting the user.

Natural Language Processing | *GNN, GRU, LSTM, NLTK, Data Tokenization* — June 2023 - February 2024

- Predicting COVID-19 lineage given genome sequences. Utilizing GNNs to evaluate drug safety and efficacy. Achieved 97.5% accuracy.
- Utilizing GRUs and LSTMs to provide an answer given a question and an image. TensorFlow/Keras framework, NLTK library for text preprocessing and tokenizing.

Orion — VEX Robotics (VRC) | *C++, Hardware Integration* — July 2020 - May 2023

- Developed odometry navigation systems, integrated with PID for smooth and precise movement in C++. Live user control robot stabilization and macros for non-autonomous portions of competition.
- 3 time world qualifier, top global rank of 8th in the world.

VOLUNTEERING

Evergreen Robotics Club — September 2020 - February 2024

- Largest VEX IQ club in the state of Washington with 30 teams (130 students). 8-week course to prepare teams for competition. Hosted 2 official statewide competitions with 50+ teams each. Led programming courses, and workshops to teach the foundational algorithms for autonomy in robotics.

Tutors Without Boundaries — September 2020 - May 2024

- Co-founded a non-profit organization providing free tutoring services and collecting donations for local charities. Raised over $10,000 in 2022 and 2023. Worked as CTO, created and managed the organization's website. Developed in HTML, CSS, JS, and React.

SKILLS

Languages: C++, Java, Python, HTML, CSS, JavaScript, React.js

Developer Tools: Git, VS Code, TensorFlow, Keras, PyTorch, scikit-learn, Pandas, NumPy, MatPlotLib, Seaborn, NLTK, OpenCV, YOLO, Jupyter