Rohan Sikand

Portfolio Website: www.rosikand.com **Email**: rsikand@stanford.edu

Education

- **Stanford University** Palo Alto, CA
  B.S. Computer Science - Artificial Intelligence Concentration *2020 - 2024*
  - **GPA: 4.1**, **Coursework**: Programming Methodology, Calculus, Minds and Machines, Inventions and IP

Experience

- **Independent Machine Learning Research**
  Researcher *Present*
  - Create projects using machine learning algorithms such as neural networks. See Research Projects Section and website: www.rosikand.com/cs-projects
- **Mignot Lab, Stanford Medicine** Palo Alto, CA
  Research Intern *October 2020 - Present*
  - Utilizing machine learning algorithms for tracheal sound analysis to detect sleep apnea.
- **Stanford ACM Machine Learning Lab** Palo Alto, CA
  Club member *September 2020 - Present*
  - Participated in workshop lecture series, learned key machine learning concepts, and applied these concepts in an end of quarter project: "Mapping Income Distribution with Machine Learning".
- **Stanford Applied Learning Initiative** Palo Alto, CA
  Software engineer *September 2020 - Present*
  - Help connect students with labs to work on high-impact research projects. Specifically, I work on building the front-end user interface of the website.
- **Stanford Biomedical Engineering Society** Palo Alto, CA
  Research team *September 2020 - Present*
  - Organize and coordinate faculty lunch series as a member of the research team.
- **Waksman Institute Summer Experience at Rutgers University** New Brunswick, NJ
  Molecular Biology & Bioinformatics Researcher *June 2018 - July 2018*
  - Conducted research regarding the isolation, sequencing, and analysis of the mRNA of *Landoltia punctata*.

Research

- **EffuseNet: Transfer Learning with Deep Convolutional Neural Networks for Differentiating Exudative and Transudative Pleural Effusion Through Ultrasounds**
  Built a novel platform to differentiate the diagnosis of a pleural effusion without the need for an invasive procedure.
- **Convolutional Neural Networks for Computer-Aided Detection of Musculoskeletal Abnormalities**
  Experimented with machine learning algorithms to automate musculoskeletal abnormality detection in radiographs.
- **Using Multispectral Remote Sensing Image Data and Neural Networks to Automatically Predict Optically Active Parameters for Inland Water Quality Analysis**
  Implemented a machine learning algorithm to predict water quality parameters from satellite imaging.

Projects

- **Mathematical Search Engine using Machine Learning** Created a demo search engine that allows a user to upload images of handwritten mathematical expressions and transform them into a functional search query.
- **Brain Tumor Segmentation using Traditional Programming** This program segments brain tumors in MRI scans through procedural programming–requires no training data.
- **Political Bias Classifier** Utilized sentiment analysis techniques to classify text as either partisan or neutral.
- **Neural Network from Scratch** Programmed a neural network architecture from scratch in pure Python.

Skills and Interests

- **Programming Languages & Libraries**: Python, Tensorflow, PyTorch, Keras, SciPy, Numpy, Pandas, scikit-learn, OpenCV, C++, C, Java, Javascript, CSS, HTML, React, Pillow, LaTex, Streamlit, Flask
- **Interests**: Artificial Intelligence, Deep Learning, Computer Vision, Web Development, Software Engineering, Natural Language Processing, Robotics, Medicine, UI/UX, Philosophy of Mind, Computational Neuroscience