

Shuning Jiang

Phone: (380) 895-3570
Email: jiang.2126@osu.edu
Website: www.jiangsn.com

Seeking entry-level software engineer position. Skilled in visualization, data analysis, deep learning, and full-stack development.

Education

- **The Ohio State University, Computer Science and Engineering** 08/2019 - current
 - Research Assistant: Interactive Visual Computing Lab
 - Teaching Assistant: Data Visualization, Artificial Intelligence, Operating System, etc.
- **B.S., University of Electronic Science and Technology of China, Software Engineering** 09/2015 - 07/2019
 - Thesis: Automatic Vehicle Detection and License Plate Recognition System

Selected Research Projects

- **Pathologists' gaze analysis** | *JavaScript, OpenSeadragon, Python, PyTorch* 09/2022 – current
 - Developed a toolkit for tumor annotations and simultaneous track pathologists' eye movements.
 - Visualized pathologists' eye gaze data using seaborn and analyzed the gaze pattern.
 - Designed an algorithm that extracts pseudo ground truths from gaze data and demonstrated the feasibility of training neural networks using pseudo ground truth alone while maintaining comparable accuracy.
- **Quantifying image complexity** | *JavaScript, Node.js, PHP, MySQL, Python* 06/2023 – current
 - Developed a full-stack online experiment platform using jsPsych and MySQL.
 - Calculated images' complexity scores using TrueSkill and Bradley-Terry algorithm.
 - Categorized the factors that make images complex such as shape/color diversity and clutters.
- **Brain imaging annotation toolkit** | *C++, Qt, OpenGL, OpenVR* 08/2019 – 02/2023
 - Developed a toolkit on top of Vaa3D for evaluating participants' annotation speed and pattern in virtual reality or desktop environments.
- **Similarity-based pathology image retrieval** | *Python, TensorFlow, OpenSeadragon, D3.js* 08/2020 – 09/2021
 - Benchmarked multiple image feature extraction algorithms and retrieved similar images in the database.
 - Developed a web application that allows users to select a custom area of a whole-slide-image and get recommendations of similar images.
- **Online vape shop scraping** | *Python, BeautifulSoup, Selenium, PyTorch, spaCy* 02/2021 – current
 - Scraped online vape products using various tools and techniques, such as Selenium for structured HTML content, YOLO and OCR for images, and spaCy and LLM for unstructured textual information.
- **Graphical perception with CNNs** | *Python, Keras* 08/2019 – 02/2023
 - Evaluated convolutional neural networks' performance on graphical perception tasks and compared it to human fairly. Quantified the effect of data sampling on CNNs' accuracy.
- **Automatic vehicles detection and recognition system** | *Python, OpenCV, Keras* 01/2019 – 04/2019
 - Used convolutional neural networks to automatically detecting and re-identifying vehicles based on license plate, vehicle model, and color.

Skills

- **Programming Languages:** Python, C/C++/C#, JavaScript, HTML/CSS, R, Java
- **Framework/Tools:** Git, Linux, Unity, OpenGL, Qt, OpenCV, MySQL, Keras, TensorFlow, PyTorch