Josephine Wang

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EDUCATION

Massachusetts Institute of Technology | Cambridge, MA — September 2023 - May 2027

- B.S. Computer Science and Engineering
- GPA: 5.0/5.0
- Relevant Coursework: Algorithms, Machine Learning, Probability & Random Variables, Linear Algebra, Discrete Math, Statistics, Multivariable Calculus

EXPERIENCE

AI/ML Engineer | Acoris, Kaunas, Lithuania — June 2024 - Present

- Developing the backend for an AI-powered workflow automation tool via Django and RAG with LangChain to leverage LLMs and streamline AI assistant integration across various platforms. Using SQL database to store chatbot customizations.
- Built two AI chatbots using React.js and Node.js to improve customer engagement and sales efficiency. Integrated the chatbots by creating an embeddable React widget with Webpack.
- Wrote a keyword finder and customer segmentation algorithm with spaCy, multilingual BERT, and PyTorch to categorize European companies for targeted marketing campaigns and enhance SEO.

Autonomy Programmer | MIT Autonomous Robotics Team, Cambridge, MA — September 2023 - Present

- Simulated LiDAR scanning via Python in ROS2 Humble to create an automated boat that avoids buoys and auto-docks.
- Recorded and transferred acoustic tracking data to MOOS-IvP via Linux, facilitating the localization of the transmitter with respect to the global frame.

Researcher | Motor Control Group, Cambridge, MA — February 2024 - May 2024

- Optimized parameters in an infant locomotion model using gradient descent in PyTorch to investigate whether infant locomotion is destination-driven or peregration-driven.
- Analyzed and modeled infant location, velocity, and cumulative area explored using Pandas and Matplotlib. Fit data to logarithmic and logistic curves with SciPy to compare infant movement patterns in rooms with and without toys.

Researcher | Tenenbaum Computational and Cognitive Science Lab, Cambridge, MA — October 2023 - May 2024

- Developed a Bayesian inference model using Gen in Julia to perform hierarchical logistic regression on primate pattern learning data, inferring parameters via Metropolis-Hastings sampling that calculate the probability that two primates being trained on spatial patterns are learning.
- Analyzed and modeled spatiotemporal pattern recognition in children and primates with Pandas and Matplotlib to identify indicators of learning

LEADERSHIP

Co-Founder | ScioVirtual, Plainsboro, NJ — June 2020 - September 2023

- Co-founded a 501(c)3 organization with 6000+ national/international registrations, 300+ instructors, and 50+ partnered schools. Raised $65,000+ for COVID-19 and hunger relief.
- Developed the ScioVirtual website (sciovirtual.org) using Figma, Webflow and HTML/CSS.
- Trained executive team members and instructors, managed registrations and emails, and managed a STEM summer camp for students grades 4-9.
- Conducted user-centered research to improve course content and logistics, increasing average course ratings by 24%.

PUBLICATIONS

Somatosensory Facts | Published April 30, 2021

- Co-authored sections on embodied cognition, tactile perception, and general neuroscience in the textbook "Somatosensory Facts" by Charles Pidgeon, PhD.
- Illustrated diagrams in the textbook, enhancing the visual comprehension of complex somatosensory concepts.

SKILLS

Programming Languages: Python, Java, JavaScript, Julia, HTML/CSS, C++

Web development (React.js, Node.js, Webpack, Django, SQL), Machine learning (LLMs, RAG, LangChain), ROS2 Humble, Data Analysis (Pandas, Matplotlib), Linux, Computational modeling (MOE, PyMol, Jmol), Graphic design (Adobe Photoshop and Illustrator)

HONORS & ACHIEVEMENTS

USA Biology Olympiad | Top 50: 2022 | Semifinalist: 2021, 2022, 2023

Science Olympiad | National Medalist