

Josh Zhang

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Education

Harvard University Cambridge, MA
BA in Computer Science & Statistics || Secondary in Educational Studies Expected 2026
Relevant Courses: Data Science, Linear Modeling, Data Structures & Algorithms, Statistical Inference, Probability, Linear Algebra, Discrete Mathematics, Multivariable Calculus

Skills

Programming Languages: Python, Swift, C++, R, Javascript, MATLAB, SQL, Sci-Kit Learn, Next.JS, Tensorflow, Pytorch
Additional Skills: OPIC Advanced Proficiency in Chinese, Blender, Fusion360, Solidworks, Photoshop, Premiere Pro, After Effects, Illustrator, Microsoft Office

Experience

Project CETI || *Research Associate* Sep 2023 - Feb 2024
◦ Worked with Professor Daniel Vogt and Harvard graduate students to devise and develop various whale tag iterations aimed at enhancing tag resilience for monitoring whale health, activity, and environmental conditions
University of Virginia Electrical Engineering Department || *Research Intern* Jun - Aug 2021
◦ Worked with Professor Steven Bowers and UVA graduate students to design and test four identical low-frequency wake-up receivers operating at nano-watt power levels, including one achieving 0.03 picowatts with a -105 dBm signal, making it approximately 100 million times more efficient than existing models

Projects

Caption Capturer || Personal Project Jan 2025
◦ Published a multi-language Chrome extension leveraging the Web Speech API, Chrome Extension APIs, and virtual audio mixers to provide real-time, accurate speech-to-text captions
Monch || HackUTD || Pinata Platinum Sponsor Category || First Place Winner Nov 2024
◦ Designed and deployed a TensorFlow-based neural network leveraging the Food101 dataset to classify food items and identify ingredients, integrating USDA data to accurately predict macro-nutrient distribution
◦ Developed a front-end user interface enabling users to scan or upload meal photos and analyze progress through goal-oriented graphs
Climate Agriculture Food Data Project || HDSI Hackathon Oct 2024
◦ Analyzed USDA/NASS 2022 Census data to examine the relationship between farmer age and agricultural productivity (1997–2022), using inflation-adjusted 2022 dollar values and raw dollar sales; identified a significant negative trend ($\rho < 0.01$) in southern regions and specific crop types through linear regression and choropleth maps
Virginia State Science and Engineering Fair || First Place || Environmental Engineering Feb - Apr 2021
◦ Created the world's first applicable sound-based fire extinguisher using low bass frequencies to put out class A-D (universal) fires in a 5-foot radius, increasing efficiency by 400% compared to existing models

Extracurriculars

Datamatch || Web Developer Oct 2024 - Present
◦ Collaborate within a team to enhance and maintain front-end functionalities of a large-scale matchmaking service by utilizing JavaScript, React, and Firebase to implement new features and improve user experience
WHRB || Sports Announcer Sep 2024 - Present
◦ Provide live play-by-play commentary and in-depth analysis for Harvard basketball and football games, engaging listeners with dynamic coverage and real-time insights on radio station Cambridge FM 95.3
Asian American Association || Treasurer Jan 2022 - Present
◦ Submit grant applications to all major student funding sources each semester, create detailed budgets for events, collect receipts, and reimburse expenditures