
Education

Stanford University (2019 - Present)

- M.S. Candidate in Computer Science, specializing in Artificial Intelligence. One of a select group of M.S. students guaranteed full tuition and stipend through Teaching Assistantships. GPA: 4.06/4

Yale University (2014 - 2018)

- B.S. Computer Science with distinction, B.S. Mechanical Engineering Sciences with distinction. *Cum laude, Tau Beta Pi*, GPA: 3.85/4
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Select Research Experience

Stanford Computational Imaging Lab, Research Assistant (2020 - Present)

- Research focuses on 3D computer vision, especially neural implicit representations. Culminated in co-first-authorship on two major papers: *MetaSDF [NeurIPS 2020]*, which reformulated generalisation across neural implicit representations as a meta-learning problem and offered a gradient-descent-based meta-learning solution, and *pi-GAN [CVPR 2021 (Oral)]*, which leveraged neural implicit representations with periodic activation functions to achieve state-of-the-art results on 3D-aware image synthesis.
Vincent Sitzmann*, Eric R. Chan*, Richard Tucker, Noah Snaveley, Gordon Wetzstein. "MetaSDF: Meta-learning Signed Distance Functions." Advances in Neural Information Processing Systems 33 (2020). * denotes equal contribution

Eric R. Chan*, Marco Monteiro*, Petr Kellnhofer, Jiajun Wu, Gordon Wetzstein. "pi-GAN: Periodic Implicit Generative Adversarial Networks for 3D-Aware Image Synthesis." * denotes equal contribution

Yale Biomechanics and Control Lab, Research Assistant (2018)

- Investigated the mechanism by which a flexible pelvis lends passive mechanical stability to jumping animals.
Venkadesan, Madhusudhan, Alexander Lee, and Eric Chan. "Passive mechanical stabilization of body rotations in jumping." 9th International Symposium on Adaptive Motion of Animals and Machines (AMAM 2019). No. CONF 2019.

Neuro-Electronics Research Flanders, Visiting scholar (Summer 2017)

- Designed and conducted experiments to determine the link between the anterior olfactory nucleus and the retention of scent information in mice. Used optogenetics to selectively stimulate neural pathways and developed a pupil-tracking measurement to evaluate stimulus response.
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Select Work Experience

Google, Software Engineering Intern (Summer 2020)

- As a member of the Visual Semantic Service team, designed and implemented a pipeline for predicting the execution cost for each component of Optical Character Recognition models given images. Created a data pipeline to collect training examples in real-time from production traffic, implemented and trained a multi-head CNN for making predictions, and integrated the model with Google's systems. Demonstrated significant improvements over prior heuristic-based system, particularly for non-Latin languages.

NASA Jet Propulsion Laboratory (JPL), Intern (Summer 2018)

- Implemented software improvements related to the simulation, visualization, and control of the Curiosity and Perseverance rovers. Created API's for calculations such as inverse kinematics for Curiosity's robotic arm and wrote algorithms to help simulate and evaluate the safety of potential paths, used in automated rover pathfinding.
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Select Leadership and Activities

Yale, Formula Hybrid Racing Team, Project Manager and EECS Team Lead (2016-2018)

- As project manager, ensured Bulldogs Racing's five engineering sub-teams, three management sub-teams, and 30+ members stayed on track and operated as a cohesive unit. Previously served as Electrical and Computer Systems Team Lead, in charge of design and fabrication of power and logic systems

Championship Robotics Team Founder, Captain, Mentor (2011 - 2019)

- Founded and guided one of the most successful teams in the Vex Robotics Competition. Accolades included back-to-back Vex World Championships division champions, out of more than 10,000 teams from 22 countries worldwide, and 3x California State Champions, out of more than 500 California-based teams.
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Teaching Experience

Stanford CS 103: Mathematical Foundations of Computing, Teaching Assistant (2019)

Yale CS 201: Introduction to Computer Science, Undergraduate Learning Assistant (2017)

Skills

Independent, capable of driving a research project from start to finish with little guidance; strong grasp of machine learning theory and applications, able to design and implement novel algorithms in fields such as vision, generative models, meta-learning and reinforcement learning; varied background and flexible skillset makes for an adaptable, quick learner.