



Vincent Lim

vincentklim@berkeley.edu | (408) 890-9493 |  vincentkslim |  vincentkslim

EDUCATION

University of California, Berkeley

Berkeley, CA

Bachelor of Arts, Computer Science

GPA: 4.0/4.0

Class of 2024

- Selected Coursework: CS 285: Deep Reinforcement Learning (self-study), CS 70: Discrete Math, Probability Theory (A+), CS 61B: Data Structures (A+), CS 61C: Computer Architecture, Machine Structures (A+), EECS 16A&B: Linear Algebra, Differential Equations, Circuits, Machine Learning (A+) | In Progress: CS 162: Operating Systems, EECS 127: Convex Optimization, CS 170: Algorithms & Intractable Problems
- Organizations: BAIR (Berkeley AI Research), AUTOLab (Automation Lab), Cal Cycling

SKILLS

Experienced: Python, Java, PyTorch, NVIDIA Isaac Gym, PyBullet, Pandas, Flask, Git, Linux, Matplotlib, OpenCV

Familiar: Javascript, HTML/CSS, R, C, RISC-V, SQL, Scheme, Solidworks, Creo Parametric, Docker

Interests: Deep Learning, Reinforcement Learning, Additive Manufacturing, Robotics

RESEARCH

AUTOLab | Undergraduate Researcher. Advised by Ken Goldberg

Jan 2021 – Present

- Worked on building and tuning novel simulation environments for deformable object manipulation using Isaac Gym and PyBullet. Experimented with different rope models to reduce sim2real gap and improve simulation fidelity and stability.
- Implemented deep reinforcement learning algorithms to extend interactive imitation and reinforcement learning algorithms
- Developed a new algorithm for simulation based Bayesian optimal experimental design for nondifferentiable implicit models using deep reinforcement learning and log-density ratio estimation.

PUBLICATIONS

* denotes equal contribution

[1] “**Sim2Real Self-Supervised Learning of Dynamic Planar Manipulation of Free-End Cables.**”

Huang Huang*, Vincent Lim*, Yunliang Chen, Jonathan Wang, Chung Min Kim, Harry Zhang, Jeffrey Ichnowski, Daniel Seita, Ken Goldberg. *Preprint*.

WORK EXPERIENCE

Software Engineering Intern

Atlanta, GA

Material in Motion

July 2019 – August 2019

- Built an internal digital signage system using a network of Raspberry Pi's running Screenly
- Designed and implemented an interface for controlling a large network of signs using Flask and Python multiprocessing
- Implemented automatic data retrieval and visualization from internal sources using Requests and matplotlib

PROJECTS

Orienting Polygonal Parts without Sensors | Available at rieff.bair.berkeley.edu/part-feeder

- Built a full-stack website to demonstrate a computational geometry algorithm to orient arbitrary 2D rigid polygonal parts that accepts arbitrary user-drawn polygons via a drawing canvas
- Implemented logging via database accesses to a SQLite database so user created polygons could have persistent storage
- Generated custom animations tailored to user input using plotly.js and planck.js with compatibility for all major browsers
- Optimized for deployment on a low power web server using Docker and webpack

budgetkeras | Python, numpy

- A functional clone of the deep learning library Keras using numpy.
- Implemented automatic differentiation, fully connected layers, weight initialization, activation functions, and optimizers.

Ender i3 Pro | Solidworks, Cura, PrusaSlicer

- Custom modifications to the Ender 3 Pro 3D Printer modeled in Solidworks. Fully re-designed x-axis carriage with support for direct drive, V6 style all-metal hotend, dual extruder gears, improved part cooling fan duct, and rear electronics case

LEADERSHIP

President of Engineering, Valkyrie Robotics FRC #299

April 2019 – April 2020

- Coordinated between mechanical and electrical divisions. Organized training sessions for new members and headed design of several major robot subassemblies. Led team to its best placement ever and a playoff appearance at a regional competition.

ACHIEVEMENTS AND AWARDS

USA Computing Olympiad Platinum Division, Harker Programming Invitational 2019 1st Place, <hack> Cupertino 2019 1st Place, National Merit Semifinalist, MTTD 2019 PG&E Excellence in Engineering Award, Jean M. Greene Scholarship