Jenny Baek

500 Memorial Drive, Cambridge, MA 02139 | (770) 881-1008 | jennyb@mit.edu

EDUCATION

Massachusetts Institute of Technology – *Cambridge, MA* **May 2025**

- B.S. in Artificial Intelligence & Decision Making GPA: 4.5/5.0
- M.Eng in EECS with Concentration in AI (Starting Sep. 2025)
- Relevant coursework:
  - **CS:** Machine Learning, Robotic Manipulation, Computer Vision, Algorithms, Computational Photography in C++, Dynamical System Modeling & Control Design, Fundamentals of Programming in Python
  - **MATH:** Statistical Data Analysis, Mathematics for CS, Probability, Linear Algebra, Differential Equations

SKILLS & TECHNICAL PROJECTS

CODING: Python, PyTorch, C++, Drake, HTML, CSS, Git

PROJECTS: Cup-stacking robot simulator, image deconvolution and Poisson editing with conjugate gradient descent, reinforcement learning robot simulator, formation control for multi-robot system, hand motion detection with MediaPipe library

RESEARCH EXPERIENCE

MIT Kavli Institute for Astrophysics and Space Research – *Cambridge, MA* **Jun 2024 – Feb 2025**

Student Researcher

- Developed a conditional diffusion model in PyTorch to remove scattered light from images taken by NASA's Transiting Exoplanet Survey Satellite. Extend the model to incorporate data from all four TESS cameras and utilize updated, high-resolution images for improved accuracy.

Reliable Autonomous Systems Lab @ MIT (REALM), MIT AeroAstro – *Cambridge, MA* **Feb 2023 – Feb 2024**

Student Researcher

- Programmed formation control software for an autonomous multi-robot system in a Python simulation. Presented the results in a lab-wide presentation.
- Used Google's Python JAX framework to program and train an autonomous navigation simulation.

MIT Media Lab, Tangible Media Group – *Cambridge, MA* **Feb 2022 – Dec 2022**

Student Researcher

- Improved accuracy of a 3D computational simulation which models landscape changes using C++ toolkit openFrameworks, for the *SandScape* exhibit at the MIT Museum.
- Collaborated with mechanical and software engineers to update *TRANSFORM*, a motion design project, to a current version of openFrameworks.

PROFESSIONAL EXPERIENCE

Bristol Robotics Laboratory – *Bristol, UK* **Jun 2025 – Aug 2025 (upcoming)**

Intern

- Will investigate the use of spiking neural networks to enable neuromorphic tactile perception in robots, aiming to enhance their ability to interpret and respond to tactile stimuli in real time.

MIT Admissions – *Cambridge, MA* **Sep 2021 – present**

Blogger Captain, Creative Contributor

- Lead the MIT Admissions Bloggers team by providing guidance, maintaining meeting notes, and collaborating with the admissions team to optimize posting strategies and logistics.
- Collaborate with the admissions team on creative projects. Worked on the 2023 and 2024 videos for announcing decisions release, and designed a poster for the incoming Class of 2029.

MIT EECS Department – *Cambridge, MA* **Sep 2024 – Dec 2024**

Course Grader [6.3950/6.3951: AI, Decision Making, and Society]