Riley Tinianov

Mechanical Engineering
University of California, Santa Barbara

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Education

- **University of California, Santa Barbara** — June 2024
  BS in Mechanical Engineering — GPA: 3.67/4.0

- **University of California, Santa Barbara** — Expected June 2025
  MS in Mechanical Engineering (Thermo/Fluid Sciences Specialization) — CGPA: 3.93/4.0

Industry Experience

- **Mynt Systems** — 03/2022 - 03/2024
  Junior Project Engineer — Santa Cruz
  - Improved efficiency of energy usage analysis for major construction clients by 10x
  - Designed, visited, and repaired dozens of solar arrays in-person, some exceeding 2 MW in size
  - Overhauled manual client-facing production reports and instead used PHP to collect data directly from third-party production APIs

Research/Project Experience

- **Spatial Climate Solutions Lab** — 10/2024 - Present
  Graduate Researcher
  - Leading all design, programming, and analysis of agrivoltaic systems for professors/execs at UCSB, WSU, The Nature Conservancy, and American Farmland Trust
  - Developed Python pipeline to automatically simulate solar production and incident flux over a 10-year span for 700 sites

- **Fluid Energy Science Lab** — 06/2024 - 10/2024
  Graduate Researcher
  - Designed and ran wind tunnel experiments with machined discs to study controlled wakes and validate analytical flow models
  - Built and commissioned hardware, calibrated instrumentation, and collected pitot tube data for feasibility testing of airborne energy systems

- **Thermal Simulation and Modeling** — 09/2024 - Present
  Independent Study
  - Developed coupled thermal-structural FEA models and time-dependent boundary conditions to study thermal gradients and stresses
  - Applied parametric sweeps and sensitivity analyses to closely fit experimental hydrograph data
  - Studied high-speed boundary layer development and airflow dynamics within orchards to improve fruit cooling models

- **Multiphase and Multiscale Lab** — 02/2023 - 03/2024
  Research Assistant
  - Independently designed, built, and programmed a PID-regulated humidity chamber
  - Research explored capillary forces in viscoelastic suspensions

- **Cause-and-Effect Vehicle: Team Lead** — 09/2023 - 06/2024
  Senior Capstone Project, California Children's Services
  - Designed and built an adaptive physical therapy vehicle for children with Cerebral Palsy
  - Awarded Top Technical Achievement for my work in designing and machining drivetrain, chassis, custom PCB, and electronic integration

Technical Skills

Developer Tools: SolidWorks, MATLAB, COMSOL, Arduino, Python
Hardware: Machining, PCB Design, Soldering, 3D Printing, Robotics
Highlight Coursework: Graduate Fluid Mechanics series, Graduate Thermodynamics series, Robotics Design

Extracurricular Activity

Collegiate Chess League 1st place 21-22, 2nd place 22-23 — 09/2021 - 05/2023