Edward Speer · *Software Engineer*

espeer5.github.io/ESpeer

Location: Austin, TX
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Skills

Languages:
- Python (7 years)
- C (4 years)
- x86/AVR Assemblies (2 years)
- Matlab (2 years)
- Julia (1 year)
- OCaml (2 years)

Development Tools:
- Git/Github
- Bash Scripting
- Linux Environments
- Jira
- Agile/Scrum
- Object-Oriented Design

Education

California Institute of Technology (Caltech) — Pasadena, CA

- Bachelor's of Science in Computer Science and Philosphy — June 2025 — 3.9 GPA
- NCAA Baseball Team Captain and Academica All-Conference Selection
- **Coursework:** Embedded Systems · Digital Logic · Operating Systems · Compilers · Learning Systems · Algorithms · Object-Oriented Design

Experience

Skyworks Solutions — Embedded Linux Development Intern — Summer 2024

- Developed embedded applications in C targetting an embedded Petalinux System
- Designed and implemented a high-performace, scalable tickless timing wheel system for a PTP stack
- Collaborated with an agile cross-functional team to deliver new value to Skyworks NetSync product line

Climate Modeling Alliance (CliMA)

- **Software Developer — August 2023 — June 2024**
  - Drove climate model validation pipeline development, which involved the integration of large meteorological datasets and the development of a suite of tools for model evaluation on single-site simulations.
  - Designed and implemented user-facing interfaces for running the CliMA Land model for single-site climate simulations, delivering value to the scientific and research community.
- **Software Development Intern — Summer 2023**
  - Collaborated with a multidisciplinary team of research scientists and engineers to develop a next-generation land surface model, aimed at advancing understanding of climate dynamics and environmental science.
  - Contributed extensively to open source code in Julia, shaping the architecture and design of the software, and implementing new biophysical models.

Texas Department of Transportation — Engineering Support Intern — Summer 2022

- Supported the project management database tool by building informative dashboards to report project metrics and statuses, providing valuable insights to department leaders for informed decision-making.
- Played a vital role in a database cleanup initiative, ensuring consistency and standardization of the reporting format used by project managers to input metrics into the database.

Projects

- **PokerBot (WIP)** — A poker playing robotic arm with custom hardware, OpenCV computer vision, a vacuum pump/suction manipulator, and Python/Ros2 software — Github
- **NormStorm** — Autonomous Mapping Rover — Equipped with IR sensors and ultrasounds, with collision avoidance and path finding software — Github
- **SpaceTanks** — A video game written in C in which a user navigates a ship through an asteroid field, fighting against enemy ships — Github
- **Embedded Hexer** — Atmel 64 Mega Programmed in Assembly to play a Hexer puzzle with embedded peripheral devices including 2 multiplexed LED displays, speaker, software debounced buttons, and Star Trek theme song. — Github