Lachlan Sneff

linkedin.com/in/lachlansneff lachlan@hyperturing.com +1 814-826-5519

WORK EXPERIENCE

Flight Software Engineer, *SpaceX* *Jun 2023 — Present*

- Designed and implemented a large amount of flight software for operating critical propulsion and mechanism systems on the v2 starship.
- Led the design and implementation of the flight software framework used for the new generation of starship flight software running on v2 and v3 ship and booster.
- Responsible engineer for vehicle software for ship 33 and ship 35 — owned delivering vehicle software necessary to safely and successfully operate vehicles for each major operation: cryoproof, static-fire, and flight. Worked with and organized hundreds of people across the entire starship organization to accomplish this.
- Worked in an on-console role (e.g. in mission control) for a number of ground operations and one flight.

Software Engineer Intern, *SpaceX* *Aug 2022 — Dec 2022*

- Led the design of a new, clean-slate flight software framework for direct-to-cell and future satellite phased-arrays, which have multiple linux nodes and hundreds of microcontrollers

EDUCATION

The Pennsylvania State University, University Park, PA *Graduated May 2023*

- Bachelor of Science in Engineering Science, Honors
- GPA: 3.67
- Senior Thesis: Neuromorphic Liquid State Machines with Astrocyte-Inspired Energy Constraints

STUDENT ORGANIZATION EXPERIENCE

Avionics Electronics Lead, *SEDS PSU* *Aug 2021 — May 2022*

- Led the electronics and firmware team for a bi-propellent rocket engine and teststand which had a successful ½ second test-fire in May 2022
- Wrote all the firmware, in Rust, for the custom boards we designed and designed one of the boards myself

TALKS

“Rocket Powered Crabs”, *Flight Software Workshop* hosted by JHUAPL *Feb 2022*

- Gave a talk about the avionics hardware and software my team and I designed for our student rocketry organization, SEDS PSU

SELECTED PERSONAL PROJECTS

Implementation of PIO (Programmable IO) *Feb 2022*

- An implementation of the RP2040’s programmable IO subsystem in Amaranth, an HDL that compiles to Verilog. This enables designs to support nearly any IO specification, from I2C and SPI to protocols that don’t even exist yet.

AtomCad *May 2020 — Sep 2020*

- Rendering system for CAD software for designing molecular nanotechnology

Nebulet OS *May 2018 — Dec 2018*

- Experimental operating system + kernel, written from scratch in Rust, that executes Webassembly in kernel mode for increased performance