

# Noah Typrin

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## Work Experience

### Blue Origin, Kent, WA

*Aerospace Systems Engineer for TeraWave Satellite Constellation*

May 2026 – Aug 2026

- Helping define TeraWave's per-system architecture as a founding team member; engineering prototypes that catch problems early, before they reach the assembly floor.
- Designed adjustable and repeatable kinematic mounts in Creo to less than 0.01° resolution, engineered for high-volume manufacturing (DFM); built and tested prototypes to drive design iteration.
- Owned optical integration end-to-end: securing cleanroom space, managing BOMs and procurement, and running the optical tests that deliver first-light results, validating the proof-of-concept.

### Northeastern Satellite Laboratory, Boston, MA

*Program Manager for NASA-CSLI Communication Satellite*

Feb 2026 – Present

- Responsible for long-term project outlook of Teralink-1 6U CubeSat, compliance with NASA-CSLI launch requirements and milestones for a Q3 2027 deployment throughout the Critical Design Review phase.
- Leading sub-systems integration across 7 different teams (including ADCS, Comms, EPS, Structures, OBC, Payload and Thermals) to resolve interface conflicts and maximize compatibility.
- Lead the program through the development of PDR and CDR design reviews, comfortably meeting tight deadlines and defending team decisions during reviews.

*Spacecraft Systems Lead for NASA-CSLI Communication Satellite*

Jan 2026 – June 2026

- Led physical architecture and subsystem integration for NASA-CSLI Teralink-1 6U CubeSat, making sure all structural and mechanical components met mission requirements for sub-terahertz LEO communication.
- Executed trade studies comparing COTS vs. custom structures; utilizing ANSYS FEA to design and validate an in-house 6061-T6 aluminum 6U chassis from scratch, achieving a 60% reduction in cost.
- Managed subsystem interfaces and 25+ requirements by collaborating with professional sources to optimize component placement and wire harness complexity while staying within mass budget requirements.
- Directed the final assembly and hardware integration of a 1U CubeSat flight unit; managed configuration and solved critical problems in real time. Scheduled for an April 2026 launch.

### Quantum Materials and Sensing Institute, Boston, MA

*Mechanical Engineer for Advanced Materials Research*

Jan 2026 – May 2026

- Performed precision alignment of terahertz optical components with kinematic mounts and apertures for repeatable positioning and experimental consistency.
- Enforced laboratory safety for Class-4 laser operations by designing and fabricating specialized enclosures, iterating and verifying them to ensure their reliability within high-risk environments.
- Engineered custom hardware for vacuum and cryogenic optical systems, using copper-101 to minimize noise and increase data precision by 10%.

### Kostas Research Institute, Boston, MA

*Undergraduate Researcher*

Apr 2025 – Sep 2025

- Research the performance effects of charge cycles on electrolytes inside two-state LFP and solid-state NMC Li-Ion batteries to understand why batteries degrade and how to improve them.
- Perform voltage sweeping tests and diagnostic measurements featuring over 1,000,000 data points, hands-on experience with temperature chambers, fume hoods and essential research practices.
- Collaborate with peers to analyze data using MATLAB and create comprehensive reports on our findings on various topics relating to chemical potential and phase separation.

## Venture MMO, Menlo Park, CA

Co-Founder and Creative Director

Sep 2020 – Aug 2025

- Founding member and Creative Director for Venture Studios: First game released to beta with strong positive feedback with over 5,000 beta users, and a 97% positive rating.
- Lead animations, portions of environmental design, lore elements, and communicating with different teams to design systems with intuitive functionality and quality features.
- Co-Lead a 7-member development team, utilizing project management, coordinating tasks and oversaw system implementation.

## Projects

*Dive Computer (Systems Integration)*

Apr 2026 – Present

*Self-Orienting Solar Panel (Gimballed mechanism)*

Sep 2025 – Mar 2026

- Fabricating a self-orienting solar array using a dual-servo gimbal, developing technical design and prototyping skills using SolidWorks, FDM Software, Altium Designer, Arduino IDE, and MATLAB.
- Running simulations in MATLAB to compare a theoretical 71% power gain versus a mounted solar model while learning about the solar interactions with Earth's atmosphere.
- Implementing the Engineering Design Process, documenting and organizing progress to write and present a manuscript at First Year Engineering Experience (FYEE) 2026 conference.

*Predator Prey Simulation (3D Simulation)*

Feb 2025 – Apr 2025

- Programmed an interactive ecosystem through Roblox Studio for kids in elementary school to interact with, teaching the topic of keystone species.
- Developed a simulation imitating species' predator-prey interactions, exercising my project management skill to managing the project's timeline and keeping the team focused.

## Education

**Northeastern University, Boston, MA** (Sep 2024 - May 2029)

*Candidate for Bachelor of Science in Mechanical Engineering, Minor in Bioengineering* | **GPA: 3.62**

**Coursework:** Thermodynamics, Dynamics, Electronics, Modern Physics, Quantitative Physiology

**Honors & Certifications:** Dean's List, Deborah & James Nolan Scholarship,

SolidWorks Professional (CSWP), PADI Open Water Diver

**Activities & Interests:** Mountaineering, Scuba-Diving, Climbing, Astronautics, Guitar, Game Development

## Skills

**Software:** Arduino IDE, Altium Designer, ANSYS Software, AutoCAD, Creo Parametric, Excel, FDM Software, Fusion 360, JavaScript, MATLAB, Python, SolidWorks, Windchill

**Technical:** 3D Printing, Bus System Integration, Circuit/PCB Design, CNC milling, Electronics, Oscilloscopes, Optical Systems, Project Management, Prototyping, Research, Team leadership.

