

Parker Rupe

parkerrupe42@gmail.com | <https://github.com/ProgrammerTurtle>

Education

Boise State University – Associates in Applied Mathematics Present
One Stone Lab 51 – High School Diploma Present
Centennial High School – High School Diploma May 2025

Projects

DoNotDelta 3D Printer github.com/ProgrammerTurtle/DoNotDelta

- Open source first-ever 3D Printer implementation of a 'Colinear Delta' — a novel hybrid of Normal Delta and Quantum Delta CNC motion systems
- Exhibited at Open Sauce 2025, San Francisco — a premier maker convention attended by leading figures in the global maker and engineering community

Quantumania 3D Printer github.com/ProgrammerTurtle/Quantumania

- Open Source 3D Printer implementation of a rare Quantum Delta motion system
- Optimized for high speed performance through custom composites work, achieving a total moving mass of under 120 grams

Charlotte CNC Composite Filament Winder github.com/ProgrammerTurtle/CharlotteCNCWinder

- Open Source fully custom 3 axis composite winder for high performance rocketry components
- Largest working area of any open source composites winder: 60" length by 10" diameter

RFP 3D Printer Toolhead github.com/ProgrammerTurtle/RFPToolhead

- Open Source high performance SLM Aluminum 3D printer toolhead
- Applied fluid dynamics principles to duct and hot end design for optimized thermal and airflow performance

Self Contained Rocket Camera Module github.com/ProgrammerTurtle/CameraModule

- Open Source self contained camera module for a high performance 3" amateur rocket
- Integrated a COTS camera with a custom LORAWAN enabled control PCB and custom machined mounting/camera shrouding
- Engineered to withstand Mach 6+ velocities and operate beyond the Kármán line (100km), the boundary of space

Experience

Stocker/Attendant, Great Scotts Gas Station – Boise, ID March 2024 – October 2024

- Performed routine maintenance of store infrastructure and facilities
- Managed product inventory across multiple brands, suppliers, and distribution channels

Organizer, HackClub – International March 2025 – Present

- Co-developed universal hardware guidelines adopted across future HackClub programs
- Standardized protocols for the handling and stewardship of participant hardware projects
- Evaluated participant hardware projects for grant eligibility, contributing to funding decisions
- Expanded awareness of HackClub opportunities and resources to teens across 119+ countries

Skills

CAD: Fusion 360, Onshape, SolidWorks, Inventor

Analysis: Autodesk CFD, Fusion 360 FEA/CAE

Manufacturing: FDM/FFF 3D Printing, CNC Machining, Composite Layup & Fabrication

CAM & Slicing: Fusion 360 CAM, OrcaSlicer, Cura, PrusaSlicer (and others)

Electronics: PCB Design (EasyEDA)

Programming: Python, G-Code, 3D Printer Firmware Development