Joseph Telaak
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Education

- **University of South Carolina** — Columbia, SC
  BSE in Computer Engineering, Minor in Math: GPA: 4.00 — *Aug. 2022 – May 2024 (Exp)*
- **South Carolina Governor's School for Science and Mathematics** — Hartsville, SC
  High School Diploma, Concentration in CS and Math: GPA: 3.8 — *Aug. 2020 - May 2022*

Experience

- **South Carolina Governor's School for Science and Mathematics** — Hartsville, SC
  Instructor — *Jan. 2023*
  - **Engineering Interim**: I helped students design and build various projects across a variety of disciplines.
  - **Engineering Projects Course**: Helped design the course for permanent placement within the course catalog.
- **SCGSSM Autonomous Golf Cart Research** — Hartsville, SC
  Founder and Team Lead — *Jan. 2022 - Feb. 2023*
  - **Project Managment**: Managed funding (Over $50k), part procurement, and technical design.
  - **PCB Design**: Designed custom printed circuit boards to create a retrofit drive-by-wire control system for multiple models of golf carts.
  - **Algorithmic Design**: Wrote software to help the vehicle to avoid collisions, navigate autonomously, and offer teleoperated control.
- **USC Cyberinfrastructure Lab** — Columbia, SC
  Research Assistant — *Summer 2021*
  - **Network Testing**: Created scripts to automate throughput and packet loss measurements.
  - **P4**: Developed applications for P4 programmable data-plane switches.

Volunteering

- **SC FIRST Robotics** — Columbia, SC
  Various Volunteer Roles — *Jan. 2022 - Present*
  - **Mentor**: Used 4 years of FIRST experience to mentor top-ranking FTC teams in SC.
  - **Field Technical Assistant**: Managed field operations. Assisted students with robot troubleshooting.
  - **Robot and Field Inspector**: Inspected each team's robot to ensure a safe and fair competition.
  - **Judge**: Interviewed teams and decided the winner of the awards.
- **SCGSSM SPARK!** — Hartsville, SC
  SPARK! Leader and Instructor — *Aug. 2020 - May 2022*
  - **Python Bootcamp**: Led and taught an 8-week Python course to SC middle and high school students.
  - **CS and Robotics**: Taught various courses in CS and robotics to SC middle and high school students.

Projects

- **Self-Driving Golf Cart**: Retrofit golf cart with drive-by-wire controls to create an Advanced Driver Assistance System (ADAS) with autonomous capabilities.
- **Open-Source Rocket Flight Computer**: "Hackable" rocket flight computer to enable users to learn flight control and embedded systems.

Programming Skills

- **Languages**: C/C++, Python, Java, P4, SQL, MIPS, x86, VHDL
- **Technologies**: ROS, Quartus, FPGA, STM32, MATLAB, Altium