

# Brian McKinley

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## EDUCATION

### University of Central Florida

*Bachelor of Science in Electrical Engineering with Honors | GPA: 3.60*

Orlando, FL

Expected May 2027

### Yu International Language and Cultural Academy

*Summer Program 2023*

Shin-Okubo, Tokyo, Japan

Aug 2023

### Lake-Sumter State College

*Associates of Arts in General Studies | GPA: 3.70*

Lake-Sumter, FL

May 2023

## EXPERIENCE

### Tutor of Mathematics and Calculus

*Lake-Sumter State College Learning Services*

Lake-Sumter, FL

2022 - 2023

- Provided one-on-one and small-group tutoring for a diverse student population in subjects including College Algebra, Pre-Calculus, Calculus I, II, III.
- Assisted students in developing effective problem-solving strategies for homework assignments, test preparation, and quantitative reasoning.

## PROJECTS

### Ancillary building Electrical System Installation

*Personal project*

Yalaha, FL

Sep 2025

- Assisted an engineer in Designing and installation of a complete electrical system, including wiring, lighting & breakers
- Adhered to the National Electrical Code (NEC) to ensure safety and compliance.
- Gained hands-on experience with circuit design, and the safe handling of electrical components 120/240 VAC split-phase.

## LEADERSHIP

### Eagle Scout

*Boy Scouts of America*

Howey-in-the-Hills, FL

2012 - 2017

- Attained the rank of Eagle Scout, the highest award in the Boy Scouts of America.
- Lead and engineered the Public Waterfront Dock Reclamation Project for the town of Howey.
- Completed 80+ diverse courses and training sessions in fields, including leadership, sustainability, and project management.

## VOLUNTEERING

### Center for Initiatives in STEM, UCF

*STEM Day volunteer & electronic instructor*

Orlando, FL

2023 - 2025

- Instructed students on how to construct a functional circuits including telegraphs, inductors, and motors to foster student's interest in engineering.
- Taught K-12 students about basic electromagnetism and theory during yearly university-sponsored STEM outreach events, enhancing communication and teaching skills.

### Habitat for Humanity

*Construction and electrical assistant volunteer*

Mascotte, FL

2022 -2023

- Contributed to the construction of new homes for financially disadvantaged families, gaining hands-on experience in framing, roofing, and interior finishing.
- Collaborated with a diverse team of volunteers to complete projects on a strict timeline, ensuring high-quality and safe construction standards.

## EXPERTISE

**Skills:** Compliant Residential Electrical Wiring, Electrolysis, Electroplating, Soldering

**Hardware:** Test and Measurement Equipment (Oscilloscope, Multimeter, Spectrum Analyzer)

**Programming Languages:** C, Python, Verilog

**Software:** LTspice, Fusion360, SolidWorks, CCS, Vivado

**Hardware Design & Verification:** Circuit Analysis, RTL Design, Testbenches, FPGA Prototyping