

Zachary Mathews, EIT

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CERTIFICATIONS

Engineer-In-Training (EIT) – EIT029482

Feb. 2023

Cisco Certified Network Associate (CCNA) – CSCO14109529

Mar. 2022

EDUCATION

Georgia Institute of Technology – ece.gatech.edu

Atlanta, GA

B.S. Electrical Engineering

Aug. 2015 - Dec. 2020

- GPA: 3.19 / 4.00

EXPERIENCE

Alzumal – alzumal.com

Atlanta, GA

A single member LLC developing add-ins for Revit.

Owner & Revit Add-In Developer

May 2024 - Present

- Developed a Revit add-in to calculate point-by-point illuminance in real-time using Vulkan raytracing.
- Conducted automated software testing to ensure the accuracy of lighting calculations using the Catch2 testing framework.
- Managed complex interop between managed C# and native C++ code using P/Invoke.
- Created a website to market SaaS software using AWS EC2 and RDS instances and integrated Stripe to process payments.
- Tracked changes to source code using the Git version control system.

Southern A&E – southernae.com

Austell, GA

A full-service architecture and engineering design firm specializing in educational, athletic, and commercial design.

Electrical Designer II & BIM Specialist

Dec. 2022 - May 2024

Electrical Designer I & BIM Specialist

Dec. 2020 - Dec. 2022

Electrical Engineering Intern

Aug. 2018 - Dec. 2020

- Documented construction requirements for lighting, power, fire alarm, intercom, and data networks in educational and recreational facilities using Revit.
- Tailored Revit families and schedules to simplify electrical load calculations and submittal review.
- Assessed and optimized lighting fixture layouts in educational and recreational facilities using Acuity Visual Lighting.
- Reviewed shop drawings and product data for compliance with project specifications and building codes.
- Conducted inspections of electrical installations at project milestones to produce punch lists for contractors.
- Developed Revit add-ins using the .NET API to automate design tasks and reduce human errors.
- Reverse engineered an MS-DOS era binary data format to extract a list of electrical loads.

Wreck Techs, Georgia Institute of Technology – wrecktechs.gatech.edu

Atlanta, GA

An on-campus residential technology support team.

Residential Technology Advisor

May 2016 - May 2019

- Provided comprehensive technical support via phone, live chat, email, and in-person.
- Diagnosed and resolved over 300 data network connection tickets, addressing both physical connectivity and configuration issues across the physical, data link, and network layers of the OSI model.
- Monitored and repaired cable TV and data network equipment serving over 10,000 on-campus residents.

PROJECTS

pyRevitBoost – github.com/zachcmathews/pyRevitBoost

May 2020 - Present

An extension to pyRevit, an IronPython environment providing access to the .NET Revit API.

- Developed an add-in that enables filtering based on any parameter assigned to Revit elements.
- Developed an add-in to import and assign electrical loads from a CSV file to Revit circuits.
- Developed an add-in to move multiple circuits from one panel to another, maintaining order when possible.