Lang Towl
Computer Engineer

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Education
B.S. in Computer Engineering concentrated in Machine Intelligence
Florida Polytechnic University
Graduation: May 2025 | GPA: 3.58

Work Experience

Front End Software Developer: Duke Energy Intern — May 2024 ⇨ Aug 2024
- Interned with the Lighthouse department of Duke Energy building PWA's in Angular JS
- Collaborated with the front-end team building features into an extensive code base

  Skills Applied
  - Angular JS, HTML, SCSS, TypeScript, Git, & Jira Task Management
  - Product development, project road-mapping, & source control

Projects

Software Developer: IOS App Development — Mar. 2023 ⇨ Current
- Actively developing an IOS app for athletes and personal trainers in the fitness industry
- Features an expandable exercise library used to create custom programs with growth-focused analytics

  Skills Applied
  - Foundational skills in Swift and SwiftUI for developing UI/UX
  - Designing full stack app architecture

Computer Engineer: Verilog Military Stopwatch — Nov. 2022 ⇨ Dec. 2022
- Designed a fully functional military style stopwatch using Verilog Hardware Description Language
- The software was written at the transistor level using Quartus Prime and deployed to an FPGA

  Skills Applied
  - Foundational skills in Verilog programming and FPGA usage for prototyping
  - How to design a complex computer system at the transistor level

Hardware Engineer: Open Source Keyboard Design Project — Nov. 2020 ⇨ Feb. 2021
- Designed a fully functional computer keyboard driven by an ATMEGA32-U4 mounted on a custom PCB
- PCBs were outsourced to JLCPCB, components were soldered by hand, and the firmware was written in C++

  Skills Applied
  - PCB design, fabrication, and optimization
  - C++ programming and optimization

Environmental Conservation: Youth Ambassador - Parley for the Oceans — Aug. 2019 ⇨ May 2021
- Worked within an international team of youth activists on several environmental initiatives
- Projects included beach cleanups, documentary series, and R&D for sustainable fishing equipment alternatives

  Skills Applied
  - Small team/project management within a large international organization
  - Experience developing and presenting pitch decks to project managers

Entrepreneur: Manta Fin Co. — Sep. 2018 ⇨ May 2019
- Identified opportunities in the surf industry for sustainable equipment alternatives
- Worked on founding an LLC that manufactures high performance surfboard fins from up-cycled ocean plastics

  Skills Applied
  - Fins designed in Fusion 360, CFD in SolidWorks, rapid prototyping with 3D printing & CNC milling

Industry Skills
- C & C++ Programming
- Angular JS, TypeScript, S/CSS, & HTML
- Swift & SwiftUI
- Python, MatPlotLib, Pandas, & Numpy
- PCB Design & Fabrication
- Proficiency in Verilog Programming for FPGA's
- CAD (Fusion 360, Eagle CAD, SolidWorks, MatLab)
- SciKit Learn & Juptyr Notebooks for Machine Learning Applications

Leadership Positions
- FPU VP of Student Government
- FPU Dir. Internal Affairs 2022 -2024
- Provosts List for Academic Standing
- MCLA Div. II Lacrosse Captain 2021-2022

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