

# JACOB LEONE

## ARTIFICIAL INTELLIGENCE SPECIALIST

Portfolio: <https://www.jacobleone.tech>

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🔗 <https://github.com/jacklion710>

### Education

#### Master of Science in Artificial Intelligence

Cumulative GPA: 3.9

Florida Atlantic University, Boca Raton, FL. Graduation date: December 2023

#### Bachelor of Arts in Psychology

Florida Atlantic University, Boca Raton, FL. Graduation date: May 2022

### Technical Skills

**Programming Languages:** C/C++, GLSL, HTML, Python, JavaScript, typescript

**Tools & Technologies:** Colab, Microsoft Office Suite (Word, Excel, PowerPoint), Max MSP, IDEs, Soldering, DSP, Raspberry Pi, DAWs

**Operating Systems:** Linux Ubuntu, Windows10, MacOS

**Frameworks:** Tensorflow, Pytorch, Pandas, Numpy, Sklearn, Matplotlib, Seaborn, React, React-Native, Chakra UI, Native-Base, Firebase, Next JS, Wavesurfer, RNBO JS

### Professional Experience

#### Graduate Research Trainee, National Science Foundation at FAU | Boca Raton, FL

August 2022 – August 2023

*Led research and development using CNNs for ocular disease detection via retinal photography.*

- Developed, and tested software for detecting ocular diseases with deep learning and medical images using Tensorflow.
- Collaborated with professors and other graduate students on performing research and designing experiments.
- Implemented a framework for a web based audio-visual solution.

#### Team Lead & Software Architect, AuthentiKid | California • Idaho • Florida

August 2023 – Present Day

*Development of robust AI systems suited for AuthentiKids business needs. Collaboration and management of a small team of developers, psychologists and business leaders.*

- Spearheaded the development of robust software systems tailored for AuthentiKid's operational requirements, resulting in new AI powered security tools.
- Managed a cross-functional team of developers, psychologists, and business leaders, fostering a collaborative environment and achieving a functional product.
- Oversaw comprehensive data collection initiatives and AI model training processes, ensuring optimal performance and accuracy.
- Directed the design and implementation of both front-end and backend, including PKI systems.

#### Production & Development (Internship), Vector Climate | Pompano, FL May 2022 – August 2022

*Worked with Vector Climate Labs to produce and develop the companies advanced mobile cooling systems.*

- Production and fabrication of the company's flagship products, the Vector and Spartan for industrial outdoor climate control.
- Collaborated with cross-functional teams for timely production and assembled PCB prototypes.

#### PCB Design & Assembly, Steven Leone; PE LLC | Lake Worth, FL

September 2020 – September 2023

*Responsible for PCB assembly duties involving prototyping, unit test and functional test assigned by Project Manager.*

- Practiced standardized procedures for following schematics, spec and BOM sheets, which led to efficient production of clients designs for timely product releases.
- Engaged in onsite coordination, progress, planning, closeout, & quality control to add support to project development.
- Soldering SMT and Thru Hole components on: PCBs, IC's, microcontrollers, power electronics, FETs, diodes and resistors. Sizes included 0402, 0603, 0805 SMT resistors, capacitors, diodes, ESD components.

### Relevant Projects

#### Object Detection System on Social Media | Deep Learning

December 2022

*The goal of this project was to implement Convolutional Neural Network for detection of opiate related activity on Instagram.*

- Designed a Convolutional Neural Network (CNN) leveraging computer vision techniques. Used web scraping post-training to analyze a vast number of images across the platform.
- Worked closely with professors and colleagues to research, design, and systematize the detection mechanism.
- The research findings are pending publication, aiming to provide insights into online drug-related activities, This potentially aids law enforcement agencies.

#### Web Based Audio-visual Platform | Web Audio & Graphics

August 2022

- Designed, built and tested CRUD web platform for my immersive art based side project. Including frameworks like Next.js, React, Chakra UI, Firebase, P5.js, RNBO.js and web audio. Repo: <https://github.com/jacklion710/jacklions-website>  
Site: <https://jacklion.xyz/>
- Integration between RNBO.js, web audio and p5.js for an interactive web based experience involving interactive audio and visual elements on a web browser.
- Created an innovative & responsive UI using typescript for user friendly web based audio-visual experiences.

#### MIDI Delay Plugin Development | Audio Development

July 2021

*Developed a unique algorithm for delaying signals in real-time using circular buffers as a function of a tuned MIDI note input in Max MSP.*

- Built a plugin for use in electronic music production using Max MSP.
- Implementation of user feedback before a product release.
- Published devices online on gumroad: <https://jacklion.gumroad.com/l/tunedelay?layout=profile>

### Relevant Coursework

Python	Data Structures	Deep Learning	C Programming
Natural Language Processing	Advanced Internet Systems	Data Science	Cognition
Artificial Intelligence	Software Engineering	AI in Medicine & Healthcare	Analysis of Algorithms
Computational Foundations of AI			