

Tyler Lewis

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EDUCATION

Chapman University — Orange, CA, USA

Masters in Electrical Engineering and Computer Science

January 2023 - May 2025

Relevant Coursework: Control Systems; Deep Learning; Computer Vision; Technical Writing

Bachelors in Computer Science

August 2020 - May 2023

Relevant Coursework: Data Structures; Algorithm Analysis; Database Management; Digital Logic
Linear Algebra; Calculus; Statistics; Web Engineering; Artificial Intelligence

Business Administration Minor

Relevant Exposure: Financial Accounting; Macro/Micro Economics

SKILLS

Programming Languages: Proficient in Python, C/C++, Java; Experience using R, JavaScript, GoLang, Solidity, Move, Swift

Programming Packages: PyTorch, Tensorflow, Num.py, Pandas.py, Node.js, Next.js

Tools and IDE: Git, Matlab, Simulink, Docker, Confluence, Jira, Excel, Bash

PROFESSIONAL EXPERIENCE

Continental Automotive - Carpinteria, CA

May 2023 – Dec 2023

LiDAR Software Engineering Intern

- Develop gTest unit-testing suite for real-time embedded LiDAR system, ensuring firmware stability.
- Create LiDAR device testing environments, enabling in-depth evaluation of hardware edge-case performance.
- Author generic drivers for control of laboratory devices, used in automated testing and validation processes.
- Maintain documentation and manage task workflows via enterprise Confluence, Git, and Jira.

Clean Coalition - Santa Barbara, CA

Project-based since June 2021

Engineering Associate

- Lead the development and implementation of the SMAP Calculator: a Python-based energy usage data analytics tool, replacing previously exacerbating tasks for the Clean Coalition team.
- Conduct comprehensive analysis to identify optimal solar array configurations and energy storage solutions.
- Acquired extensive knowledge of off-grid energy systems in both residential and commercial projects.

Electriq Power / IEEE

June 2022 – November 2022

IEEE Blockchain-Enabled Transactive Energy (BCTE) Application Developer

- Develop "EnergyChain," a comprehensive full-stack application aimed at demonstrating the potential for peer-to-peer energy trading services within a decentralized network.
- Collaborate closely with the client and the IEEE project manager to ensure alignment with project specifications, leading to a refined and well-executed final product.

Acelerex - Santa Barbara, CA

May 2022 – July 2022

Microgrid Engineering Intern

- Conduct a comprehensive audit of all components within a residential microgrid system, documenting and validating ports and communication standards, enabling a fine-tuned smart-controller integration.

INVOLVEMENT AND LEADERSHIP

Southern California R Users Group Data Hackathon, UCI

April 2024

Competition finalist; submission recognized as 'Best Analysis'

Chapman Computer Science Club

Vice President

January - May 2024

Event Coordinator

August 2022 - May 2023

Chapman Tutoring & Learning Center

Computer Science Tutor

August - December 2022

Provide supplementary support for data structures, object-oriented programming, math, etc.

Smart-Contract Research Assistant

May - August 2022

Chapman research project concerning viability of blockchain smart contracts for real-world application.

PRESENTATIONS

T. Lewis, S. Honikkman, J. Kempf “Energy Chain,” *IEEE Blockchain Transactive Energy Initiative*, Nov 9 2022

T. Lewis, I. Sen, “Stock Exchange Rates in Relation to COVID-19,” *Chapman University Student Scholar Symposium*, May 2022

KEY PROJECTS

Deep Learning Implementation for Image Colorization

May 2024

- Implemented a neural-network pipeline for predicting colors in a greyscale image.

Solar Microgrid Analysis Processor (smap.clean-coalition.org)

December 2023

- A suite of tools for cleaning, presenting, and analyzing energy meter data .
- The primary function of this tool is to optimize solar and storage sizings for maximum economic and resilience benefits.
- Streamline time intensive manual tasks and is now actively used in the Clean Coalition’s solar microgrid methodology.

EnergyChain

October 2022

- IEEE BCTE initiative seeking solution to integrate blockchain and energy grid.
- The goal was to enable residential energy producers and consumers to execute energy transactions on blockchain platform.
- Leveraged Linux Foundation's Hyperledger Fabric to build a custom blockchain platform for proof-of-concept project.
- Sole software developer for this project, also built a front end interface to interact with blockchain backend.

Web-Canvas Play

May 2022

- 100lewis.com; A creative web-development project playing with web canvas.

FPV drone

April 2022

- Designed drone frame using CAD software, fabricated on Markforged Carbon Fiber 3D printer.
- Implemented PID control system.

Digital Asset Price Analysis App

December 2021.

- Python interface performed analytic queries in regard to price-analysis on digital NFT assets.

MISC.

Took gap semester Fall 2023 to continue pursuit at Continental Automotive

Ocean Beauty Seafoods - Naknek, AK

June 2020 – August 2020

Quality Control Supervisor / Dock Operation Hand

- Post-Highschool excursion seeking life experience.
- Oversee quality control procedures and contributed to various dock activities for Alaska salmon operation.
- The “full-stack” of manual labor jobs.

Lifelong hobbyist in both hardware and software

High school varsity swimmer

Recreational tennis player

Paragliding P2 Certification