Luke Irwin

Omaha, NE | (531) 777-0947 | lukemirwin@gmail.com | linkedin.com/in/lukemirwin

EDUCATION

UNIVERSITY OF NEBRASKA OMAHA *Omaha, NE*
Bachelor of Science in Computer Science, Honors Student *Exp. May 2025*
Concentration in Software Engineering
GPA: 3.906

EXPERIENCE

SHYFT SOLUTIONS *Omaha, NE*
Software Engineering Intern *May 2024 – Present*

- Developed a package of scripts using Python to recursively traverse a directory and parse each XML file to validate, using PyTest, that company defined standards are met within each file.
- Collaborated with a primarily remote team to make templating scripts for XML files for effortless deployment of new instances of our product.
- Demoed my work to multiple groups and applied feedback given by the groups to make improvements and modifications based on projected goals.
- Worked flexibly in an Agile environment consistently making and updating tickets and stories based on tasks discussed with my team.

BIOINFORMATICS RESEARCH LAB *Omaha, NE*
Student Web Developer *Apr 2023 – May 2024*

- Developed a website for a bioinformatics program (E-PACERR) at UNO with Next.js.
- Maintained the website applying regular git commits and pushes to GitHub.
- Applied and received a FUSE (Fund for Undergraduate Scholarly Experience) grant to develop a statistical analysis report on the survey results gathered from the E-PACERR program.
- Designed the website in its entirety using Figma to ensure optimal user experience and Section 508 compliance.

FISERV *Omaha, NE*
Artificial Intelligence and Applications Development Intern *Jun 2023 – Aug 2023*

- Engineered an end-to-end article writing program for the marketing team using the LangChain framework and OpenAI's GPT-3.5-Turbo model, including planning, drafting, and editing functionalities.
- Worked with SQL and to assist in creating queries on internal databases.
- Contributed to the enhancement of troubleshooting documentation pertaining to Oracle issues, both through updating and authoring documents.

PUBLIC HEALTH INFORMATICS RESEARCH LAB *Omaha, NE*
Student Web Developer *Aug 2022 – Apr 2023*

- Designed and implemented the front-end UI for an Administrative management page for an IoT application using Angular.
- Collaborated with the team to update all major pages of the application, enhancing its functionality and UX.

ADDITIONAL

Programming Languages: Python, C, Javascript/Typescript, Java, HTML, CSS, and SQL.
Technical Skills: Angular, React, Figma, Prompt Engineering, Databases, Code Documentation, Git, Data Structures, and Algorithms.
Certifications & Training: LinkedIn Python and HTML badges; DeepLearning.AI Prompt Engineering for Developers, Building Systems with the ChatGPT API, and LangChain for LLM Application Development courses.
Awards: FUSE (Fund for Undergraduate Scholarly Experience) Grant 2024; Dean’s List Multiple Semesters (Fall 2021 - Spr 2024); Chancellor’s List (Fall 2022, Fall 2023)

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NOTABLE PROJECTS

THE GALLERY (JAVASCRIPT)

Independent *Active*

- Tools/Technologies Used: Game Programming, Game Design,
- Main Achievement: Designed a game with all original assets, implemented it into a static website without using a framework, and effectively displayed my portfolio in a creative way.
- Impact: Shows off some of my programming talents while showcasing some of my projects in an interactive and engaging format.
- Repository: https://github.com/lukeirwin03/e-pacerr-website
- Link: https://lukemirwin-portfolio.vercel.app/

HOME SERVER (C, PYTHON)

Independent *Active*

- Tools/Technologies Docker, Socket Programming, Computer-Vision, Image Processing, Raspberry Pi
- Main Achievement: Containerizing a server that I can access via a generic TCP client app on my phone. Upon client connection, the server messages the client a list of actions the server can perform, the primary one being telling me how many parking spots are available in my parking lot.
- Impact: Creating an open-source, containerized server that anyone can put on a Raspberry PI or other computer.
- Repository: https://github.com/lukeirwin03/e-pacerr-website

ARTICLE GENERATION (PYTHON)

Fiserv *Aug 2023*

- Tools/Technologies Used: Python, LangChain, OpenAI API, Prompt-Engineering
- Main Achievement: Produces full-length articles from a single input of a topic by chaining LLM calls to iterate through the steps of writing an article(outlining, drafting, and editing). Additionally, the program writes the article to a markdown file for seamless article hosting.
- Impact: Reduces the amount of time and people needed to write high-quality articles and increases the responsiveness of Fiserv's marketing team to new and notable trends.
- Repository: N/A - Proprietary

FROG GAME WITH NEURAL NETWORK (PYTHON)

Honors Colloquia: Computers and Complexity *May 2023*

- Tools/Technologies Used: Python, PyGame, SciPy, NumPy, OOP
- Main Achievement: Developed a replica of the Google Chrome "Dino" game and applied a neural network and evolution algorithm to demonstrate machine learning.
- Impact: Serves as a demonstration of principles of evolution and machine learning.
- Repository: https://github.com/lukeirwin03/Dino-NeuralNet

TWITTER BOT (PYTHON)

Independent *Jul 2022*

- Tools/Technologies Used: Tweepy API, HappyTransformer's DialoGPT, OOP
- Main Achievement: Created a Twitter bot capable of generating AI-based responses to tweets using natural language processing.
- Impact: Enhanced user engagement by providing intelligent replies based on included hashtags.
- Repository: https://github.com/lukeirwin03/TwitterBot-_Dexter_-