JACK LAY

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As a 3rd year computer science student at CU Boulder, I am on pace to graduate in Spring 2024. I am passionate about pursuing a career in the tech industry, with a focus on software engineering, data analysis, and machine learning/AI.

EDUCATION

BS	University Of Colorado Boulder, Computer Science	May 2024
	University Of Colorado Denver, Physics	August 2018 - May 2019
HS	Cherry Creek High School, General Diploma	May 2018

EXPERIENCE

EC Data Systems (Denver, Co) May-August 2016-2019, 2021, and 2022
Server Technician

At EC Data Systems, I honed my customer support skills while taking on additional responsibilities. My tasks included assembling and partially configuring servers, installing and maintaining them across multiple data centers, and hand-terminating numerous straight and crossover CAT5 cables. I also contributed to the company by redesigning their website and developing an internal SQL tool for managing their network.

JJ Lay Co. (Englewood, CO) May-August 2014-2015, 2020
Install Technician

As a team member at JJ Lay Co, I played a crucial role in the installation of residential water heaters, AC condensers, and furnaces. In addition to providing hands-on support, I contributed to the smooth functioning of the company by managing and organizing warehouse inventory.

TOP SKILLS

Programming:
Python, Java, C, C++, SQL, Object Oriented & Functional

Productivity:
Word, Excel, PowerPoint, Adobe Acrobat

PROJECTS

Chess Engine

Developing a chess engine is an ongoing project that requires a deep understanding of algorithms, data structures, and artificial intelligence. I am currently gaining valuable experience in harnessing and managing multiple algorithms, optimizing code efficiency, and integrating an AI agent to learn and implement the optimal strategy.

Overall, this project is a true test of my programming skills and requires a combination of creativity, technical expertise, and problem-solving abilities. Through this experience, I am developing a strong foundation in programming and a passion for developing innovative solutions to complex problems.

Text Adventure

I am currently developing a Java-based text adventure game that integrates a screen to manage inventory and show relative location. While still in the early stages of development, this project is a testament to my technical ability and problem-solving skills.

The game functions like any other text adventure game, taking input only through an integrated console. However, by adding a screen to manage inventory and show relative location, the game becomes more engaging and immersive for players. This innovative feature demonstrates my ability to think outside the box and create unique solutions to enhance user experience.

Although the project is currently on the back burner, I am eager to continue working on it and explore the potential impact it can have in the gaming industry.

Noise Generator

A Java project that generates random noise by setting a base layer to a color and selecting pixels at random coordinates. With the ability to customize the number of attempts and size of the image, this project is a testament to my proficiency in I/O, GUIs, and data structures.

This project not only demonstrates my technical skills but also my creativity and problem-solving abilities. The ability to export a list of coordinates opens up the potential for further analysis and manipulation in other projects.

This project served as a valuable learning experience that allowed me to strengthen my skills in various areas of programming. I am excited to continue exploring new and innovative ways to utilize these skills to create impactful projects.

Analyzing the outcomes of sports betting

A data analysis project using Python and common data science libraries such as Pandas and SciPy. The project involved wrangling and analyzing NBA betting data

from '07-'08 through '22-'23 seasons to determine if betting on the point spread is more profitable than betting on the money line underdog.

By utilizing multilinear regression techniques and conducting thorough hypothesis testing, I was able to deny my initial hypothesis and present my findings in a formal presentation. This project demonstrated my ability to use Python and data science tools to tackle complex problems and draw meaningful insights from data.

Aswell, the project allowed me to develop important skills such as hypothesis formation, data wrangling, statistical analysis, and data visualization. The presentation of my findings further strengthened my communication and presentation skills.

Network Enabled TicTacToe

As part of a collaborative software engineering project, my team and I developed a Tic-Tac-Toe game in Java with a fully functional GUI. The game allowed two players on the same network to compete against each other in real-time. To complete the project, we utilized an Agile-inspired work infrastructure that involved iterative development and constant feedback loops.

This project allowed me to hone my skills in Java programming, GUI development, and software engineering principles. Additionally, working in a team environment allowed me to develop important skills in teamwork, project management, and communication.

By successfully delivering a functional and user-friendly Tic-Tac-Toe game, my team and I demonstrated our ability to develop complex software projects. This project also helped me to understand the importance of teamwork, collaboration, and communication in software engineering.

RPG Game

As a team project, we created a small but robust RPG-style game in Python. With save state capabilities, the game could support multiple characters with unique inventories and names. It featured a combat and leveling system, providing visible progression as players advanced through the game. Additionally, players had the option to fight a final boss when they reached a high enough level.

RELEVANT COURSES

When you list courses, include a brief description so that the course can be compared to a similar course at another university. You might want to include the typical number of students in the course as well as list your responsibilities such as developing course materials, lecturing, grading, developing the syllabus, etc. How you decide to list or group your courses, skills, teaching methods, roles, and responsibilities will depend on your amount of experience. The examples below are just a few ideas.

PROFESSIONAL AFFILIATIONS

Name of Organization, 200X-Present
Description of role or responsibilities, if applicable.

Name of Organization, 200X-Present
Description of role or responsibilities, if applicable.

PROFESSIONAL SERVICE

Symposium Co-Organizer
Name of Conference, Symposium, Year

Peer-Reviewed Articles for:

- Name of Journal
- Name of Journal

COMMUNITY SERVICE

Organization
[Title/Position/Duty], [Location], Dates

Organization
[Title/Position/Duty], [Location], Dates

LANGUAGES

List the languages that you know, along with your level of proficiency. Use an appropriate proficiency scale such as the ACTFL which provides guidelines for Novice, Intermediate, Advanced, Superior, and Distinguished levels in Listening, Speaking, Reading, and Writing.

English: Native Language

Spanish: Intermediate Listener, Novice Speaker, Advanced Reading and Writing

COMPUTER SKILLS

It may be useful to provide a summary of your relevant skills, such as your computer skills. You could list your skills using a consistent format such as

Programming: skill 1, skill 2, skill 3, skill 4

Applications: skill 1, skill 2, skill 3, skill 4

Platforms: skill 1, skill 2, skill 3, skill 4

OTHER

Interests/Hobbies worth noting
Citizenship

REFERENCES

Dr. Albert Jones, [Title]
[Department Name]
[University Name]
[Mailing Address]
Phone: [Phone #]
Email: [email address]

Dr. Anne Smith, [Title]
[Department Name]
[Company Name]
[Mailing Address]
Phone: [Phone #]
Email: [email address]