

Saul Varshavsky

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Education

DRAKE UNIVERSITY (2020 – 2024)

Des Moines, IA

Bachelor of Science in Computer Science, Data Analytics, and Artificial Intelligence (Magna Cum Laude)

GPA: 3.87/4.0

Coursework includes Cloud Computing, Regression Models & Time Series, Natural Language Processing, Human Computer Interaction

Student Representative on Artificial Intelligence Search Committee (2020 – 2022)

Artificial Intelligence Student of the Year Award (Outstanding Academic Performance in the Artificial Intelligence Curriculum), Trustee Scholarship (Competitive Academic Merit), Presidential Scholarship (Academic Merit)

Work Experience

SAMMONS FINANCIAL GROUP

West Des Moines, IA

AI Software Engineer

August 2024 – Present

- Developed dynamic chat interactions using multiple LLM models via **OpenAI** API calls, reducing costs significantly by providing an alternative to ChatGPT enterprise for Sammons' employees
- Designed a model selector feature using **Next.js**, allowing users to choose their preferred LLM for customized interactions
- Integrated **DALLE** with web browsing tools, allowing the AI assistants to generate images and obtain relevant online information
- Converted **JSON** and **YAML** schemas into robust API routes using **JavaScript**, enabling the AI assistants to execute tasks with precision
- Integrated **Langchain**, **Scikit-learn**, and **CrewAI** with **Python** to create AI agents for performing specialized tasks, streamlining complex processes and enabling the agents to accomplish multifaceted goals
- Built and styled responsive web pages with **JSX** and **Tailwind CSS**, improving the overall user interface of the chat application
- Conducted 31 rigorous tests of all the web features using **Jest**, ensuring high functionality of the chat application
- Optimized page load times using **Lighthouse**, resulting in smoother navigation between the webpages in the chat application

SIEMENS DIGITAL INDUSTRIES AND SOFTWARE

Wilsonville, OR

Data Analytics Intern

June 2023 – July 2024

- Built interactive dashboards in **Tableau**, enabling collaboration between the field and product segments
- Cleaned and re-structured Serviceable Available Market (SAM) data using **Visual Basic for Applications (VBA)** to design the dashboards and convey how large the market opportunity is to sell Siemens' products
- Created user flow diagrams to demonstrate how all the Excel worksheets pertaining to the SAM data are interconnected
- Designed queries in **Microsoft Access** to merge data tables together, ensuring comprehensive dashboard information
- Communicated the step-by-step process for updating the dashboards, allowing users with no **Tableau** experience to keep data current

BCU

Vernon Hills, IL

Systems Analysis Intern

May 2022 – August 2022

- Innovated a Data Management Maturity Assessment using **Power Apps**, enabling BCU to gain awareness of their data usage
- Designed wireframe diagrams to plan the structure of the Data Management Maturity Assessment, accelerating BCU's progress towards becoming a data-driven enterprise
- Collaborated with interns from various departments to develop an employee resource group, helping employees gain vital skills for adaptability and resilience in the workplace

DATA SCIENCE FOR THE PUBLIC GOOD YOUNG SCHOLARS PROGRAM

Ames, IA

Data Science Intern

May 2021 – August 2021

- Collaborated with the National Science Foundation to investigate factors leading to higher data reusability, ensuring existing research is retained and inspires future scientific breakthroughs
- Automated part of the data scraping process for research papers in **Python**, resulting in data being organized efficiently yet accurately
- Created dashboards in **Google Data Studio** to help the nonprofit Eat Greater Des Moines identify weaknesses in their food rescue process
- Constructed 4 detailed maps in **Python** of food donor and recipient locations using multiple **SQL** databases
- Presented our team's delivery of results, which later became credited by the American Statistical Association for high quality

Additional Experience

DATA ANALYTICS CAPSTONE

Des Moines, IA

Student

January 2023 – May 2023

- Developed Random Forest models, enabling MidAmerican Energy to identify in advance which turbines will stop working
- Automated data cleaning processes with reproducible **R** code, ensuring efficiency and consistency for MidAmerican's data science team
- Structured the data uniquely for predictive modeling, allowing MidAmerican Energy to identify potential failures early and reduce unnecessary costs by around 15%

NCNA REGIONAL PROGRAMMING CONTEST

Ames, IA

Contestant

February 2021 – November 2023

- Performed advanced coding tasks in **Python** and **Java** within a 5 hour time frame, demonstrating proficiency under pressure
- Collaborated with my team to solve 2 out of 10 complex programming challenges, showcasing strong problem solving and teamwork skills

DRAKE-WELLMARK BLUEX PROGRAM

Des Moines, IA

Novice Technology Intern

February 2021 – May 2022

- Created dashboards using **PowerBI** to analyze factors correlating with negative customer reviews of Wellmark's health insurance plans, enhancing insights into customer feedback
- Implemented a machine learning project in **Python**, utilizing clustering and normalization to accurately predict the number of calories a person can expect to burn when running

DRAKE CODING CLUB

Des Moines, IA

Member

June 2020 – December 2023

- Designed and implemented algorithms to effectively solve various problems, enhancing my problem solving skills
- Developed a physics simulation in **Java** and provided a comprehensive explanation of its workings, demonstrating my ability to communicate abstract concepts

BANK FAILURE PROJECT

Des Moines, IA

Research Assistant to Dr. Eric Manley

June 2020 – August 2020

- Collected and organized data from 6 massive datasets to analyze factors contributing to the 2008 economic recession, ensuring thorough data preparation for analysis and modeling

Projects

RESUME AND COVER LETTER FEEDBACK APPLICATION

- Planned and developed an application in **Python** to offer users tailored feedback on their uploaded resumes or cover letters
- Utilized **TensorFlow** to implement three Natural Language Processing (NLP) techniques, enhancing the application's personalized feedback
- Ensured seamless adaptation of the NLP technique Context Free Grammars, enabling automatic adjustment to any sentence structure

WORKOUT PLANNER APPLICATION

- Integrated **Amazon Web Services (AWS)** and **Python** to develop a web application enabling users to create personalized workout plans
- Implemented both relational (**MySQL**) and non-relational (**DynamoDB**) databases to ensure users can choose and save exercises aligning with their fitness goals

Technical Skills

- *Web Development:* Next.js, JavaScript, JSON, HTML, CSS, Jest, Flask, Figma, Lighthouse, ParseHub
- *Databases:* MySQL, SQLite, Microsoft Access
- *Analytics & AI:* Python, R, SAS, TensorFlow, PyTorch, Scikit-learn, CrewAI, OpenAI, Hugging Face, DALL-E, Langchain
- *Data Visualization:* Tableau, Microsoft PowerBI, Google Data Studio, VBA
- *UX Design:* Figma, Microsoft PowerApps
- *AWS Tools:* DynamoDB, MongoDB, RDS, Cloud9, Lambda
- *Other:* Java, Haskell, C#, C