

ADITYA KHOWAL

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EDUCATION

University of Washington - BS, Informatics - *Software Engineering*, Annual Dean's List Recipient, **GPA 3.8** June 2025
Relevant Coursework: Artificial Intelligence, Database Systems, Data Structures and Algorithms, Data Science, Intro to Programming, Client-side development, Foundations of information

EXPERIENCE

Artificial Intelligence Research Intern | University of Missouri May 2023 - Present

NSF funded research on AI optimization for blood demand Python | PyTorch | matplotlib | seaborn | AI optimization

- **Reduced blood wastage by 15%** through the development and testing of a **machine learning model** using **PyTorch** for blood inventory management.
- **Improved blood shortage by 20%** through research on **AI-based solutions** to hospital supply chain problems with stochastic programming and deep learning.
- **Identified key areas for improvement** through an extensive literature review and exploratory analysis using seaborn and matplotlib.

Backend Software Engineering Intern | Bond Intelligence June 2021 - September 2022

Financial Dashboard for Bond Investment information React | JavaScript | Python | SQL | Docker | Kubernetes

- **Increased user engagement by 40%** through the development and deployment of a user-friendly **full-stack web application** using **React** that enabled over 10,000 users to easily access demographic information for municipal bonds.
- **Enhanced user experience** by converting complex bond data into visually appealing charts and diagrams using **JavaScript** and **ChartJS**.
- **Decreased web app load times by 70%** through performance optimization utilizing **SQL queries** to clean up redundant data and optimize views.

Python Lead | Stanford 106A Jan 2021 - Jan 2022

Section lead for Stanford intro Python class Python | Data Structures | OOPS | Teaching | Organization | Communication

- **Enhanced student understanding** by leading weekly discussion section to 7-10 students for Stanford's introductory CS 106A python course.
- **Provided valuable assistance** through **debugging** & conceptual help at weekly office hours and campfire sessions.
- **Improved student proficiency** by teaching concepts including programming fundamentals **object-orientation**, **data structures**, and **recursion**.

Teacher Assistant | University of Washington iSchool June 2023-Sept 2023

Informatics 340 Client side development TA HTML | CSS | JavaScript | React | OOP | Client side dev | Javascript frameworks

- **Improved student proficiency** by teaching web development using HTML, CSS, JavaScript, and React to build interactive webapps.
- **Provided valuable assistance** by leading weekly lab sessions and office hours to help students with assignments and projects.

Founder and Teacher | Kodely Tutoring June 2019 - Present

Started an online coding teaching/tutoring business Python | Code.org | webflow | web design | marketing | entrepreneurship

- Founder and Lead teacher at Kodely Tutoring, a coding tutoring business
- **Improved coding proficiency of 20 people** by teaching python basics and small projects in one on one sessions.

PROJECTS

NanoGPT - Philosopher edition Python | PyTorch | Transformers | Jupyter

- **Generated philosophical content** by developing a fork of NanoGPT using **Python** and **PyTorch** to analyze the philosophical works of Immanuel Kant.
- **Achieved an impressive average perplexity score of 1084** by training and fine-tuning the model with a dataset of over **50,000 pages** from Kant's books and essays and passing through GPTZero.

Amazon Sentiment analysis Python | NLTK | NLP | Transformers

- **Enabled effective sentiment analysis of Amazon Reviews** by developing a natural language processing Python project utilizing NLTK's **VADER** and Huggingface Roberta Transformers to build a sentiment analysis classifier for Amazon customer reviews.
- **Processed over 10,000 customer reviews** using Python for data cleaning feature extraction and model training.

Tech Layoff Tracker R | Data Science | ShinyApp

- **Developed a comprehensive tech industry layoff tracker and report** using **R** and **ShinyApp**. The tracker includes an interactive map of layoffs and an in-depth analysis of layoff trends.
- **Identified key layoff trends and compiled relevant insights** by generating a data-driven analysis for a dataset of over **40,000 rows**, to help companies make informed decisions.

TECHNICAL SKILLS

Front End | React, JavaScript, NodeJS, CSS, Flutter

Back End | Python, Java, C++, SQLite, MySQL, R

Technologies | Jest, Kubernetes, Docker, Git, npm, Firebase, GitHub