

Arshdeep S. Ghotra

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Education

Indiana State University, Terre Haute, IN

BACHELOR OF SCIENCE IN COMPUTER SCIENCE, GPA: 4.0/4.0

Anticipated May 2025

Skills

Languages

Python, JavaScript, HTML, CSS, Java, C++, SQL

Data Science Tools

Pandas, NumPy, SciPy, Scikit-Learn, TensorFlow, Keras, Matplotlib, Seaborn

Machine Learning

Supervised Learning, Unsupervised Learning, Transfer Learning, Model Evaluation

Databases

MySQL, PostgreSQL, MongoDB

Web Development

React, Node.js, Express.js, Flask, RESTful APIs, AJAX, Bootstrap

Tools

Git, Jupyter Notebook, Vercel, Postman, Render, Sublime Text, Visual Studio Code

Experience

Cunningham Memorial Library, Terre Haute, IN

July 2024 - Present

Advanced Library Technology Assistant

- Extracted, processed, and analyzed over 10,000 datasets from university and Online sources, significantly improved data accessibility by exporting them into structured CSV formats.
- Developed a custom automation program to normalize and clean datasets, enhanced data quality, and reduced manual processing time by 60%.
- Collaborated in the maintenance and optimization of the university's website, provided technical support and troubleshooting to ensure seamless functionality, contributing to data-driven decision-making.

Sara Software System LLC, Kansas

May 2022 - June 2022

Data Analyst Intern

- Processed and cleaned over 500,000 rows of customer data using Python and Excel, resulting in a 15% improvement in data quality and ensuring accurate reporting for data-driven decision-making.
- Automated monthly performance reports by developing Python scripts and optimizing SQL queries, reducing manual reporting time by 30%, and accelerating insights for management.
- Created dynamic data visualizations in Python and Excel, contributing to a 12% improvement in team efficiency by delivering clearer, actionable insights.

Projects

Course Finder 🔄

June 2024 - July 2024

TECH STACK: PYTHON, REACT, HTML, CSS, API, NODE.JS, EXPRESS.JS, POSTGRESQL

- Developed a course recommendation platform that curates personalized learning paths for users.
- To simplify the course selection process and enhance user engagement by providing tailored recommendations based on individual preferences.
- Implemented a smart filtering algorithm and designed a user-friendly interface, reducing course selection time from 10 minutes to 30 seconds.

Mental Health Chatbot 🔄

May 2024 - June 2024

TECH STACK: PYTHON, MACHINE LEARNING, NLP, REACT, FLASK, CSS, API

- Created an AI-driven mental health chatbot with accuracy of 92% that engages users in conversations for emotional support.
- To provide users with a supportive companion that offers advice and light-hearted conversation, promoting mental well-being.
- Integrated thoughtful and playful responses, developed a feedback loop for continuous improvement, and achieved a 40% increase in user satisfaction.

Movie Recommendation System 🔄

July 2024 - July 2024

TECH STACK: PYTHON, MACHINE LEARNING, SURPRISE LIBRARY, SVD, REACT, FLASK, CSS

- Engineered a movie recommendation system using the Surprise library, providing users with personalized recommendations that resulted in a 50% increase in user retention.
- Curated a database of over 1,000,000 films spanning from 1970 to 2023, ensuring comprehensive coverage of user preferences.
- Optimized the recommendation algorithm to achieve a high precision rate of 90%, significantly improving user satisfaction during movie selection.

Dog Breed Identifier 🔄

Jan. 2023 - May 2023

TECH STACK: PYTHON, TENSORFLOW, DEEP LEARNING, MOBILENETV2 FRAMEWORK, FLASK, REACT, CSS, API

- Developed a dog breed identification tool that accurately recognizes breeds from images.
- To assist dog lovers and professionals in identifying breeds easily, especially for adoption processes.
- Utilized a trained machine learning model, achieving an 85% accuracy rate and creating a user-friendly interface that enables identification in under 5 seconds.

Certifications & Publication

2024 Exceptional Academic Excellence | Indiana State University

2023 Exceptional Academic Excellence | University of North Alabama

2023 Research Paper on Balancing phosphorus fertilization using machine learning | 10.1016/j.fcr.2023.109169

2023 Research Paper on Dog Breed Identification | (IRJET), Volume 10, Issue 05, May 2023.

2023 Data Analytics and Visualization Virtual Experience | Accenture, Forage Co.

2023 Complete Machine Learning & Data Science Bootcamp 2023 | Zero to Mastery, Udemy

2022 Ethical Hacking Certification| NPTEL