

# 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

- Scraped and processed over 10,000 data files from the universities and online websites, efficiently extracting datasets and exporting them into CSV format to enhance data accessibility.
- Developed a custom automated program for data normalization and cleaning, improving data quality and reducing manual processing time by 60%.
- Played a key role in maintaining and improving the university's website, providing technical support and troubleshooting to ensure its seamless operation.

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, improving data quality by 15% and ensuring accurate reporting for better decision-making.
- Automated monthly performance reports by writing Python scripts and optimizing SQL queries, reducing manual reporting time by 30% and providing faster insights to management.
- Developed dynamic data visualizations using Python and Excel, leading to a 12% improvement in team efficiency through clearer, more 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 Field Crops Research A long-term study using machine learning| Volume 304, 1 Dec. 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