

# Arshdeep S. Ghotra

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## Work Experience

### Glas-Col, Terre Haute, IN

Oct. 2024 - Present

#### IT Intern

- Developed and optimized cloud-based SQL databases by mapping and modifying reports from a standalone server, enhancing system performance and data accessibility.
- Collaborated with the Plant Manager to implement database solutions, ensuring smooth data migration and integration for improved reporting capabilities.
- Gained proficiency in SQL and cloud technologies while generating detailed reports to support decision-making processes, directly aligning with academic objectives in database management.

### Cunningham Memorial Library, Terre Haute, IN

July 2024 - Present

#### Advanced Library Technology Assistant

- Scraped and processed over 10,000 data files from the university's 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%.
- Managed ongoing upgrades and updates for digital content within established timelines on the university's website, resulting in successful implementation of five major features that improved usability ratings among student users.

### Sara Software System LLC, Kansas

May 2022 - June 2022

#### Data Analyst Intern

- Processed and cleaned customer datasets (over 500,000 rows), improving data quality by 15% and ensuring reliable insights for decision-making.
- Developed and optimized automated solutions using Python and SQL, reducing reporting time by 30% and improving overall accuracy by 15%, ensuring high data quality for reliable healthcare software systems.
- Created real-time visualizations that were presented to senior leadership, improving team efficiency by 12% through clearer, more actionable insights.

## Education

### Indiana State University, Terre Haute, IN

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

Anticipated May 2025

## Projects

### Course Finder 🔄

June 2024 - July 2024

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

- Developed a course recommendation platform with smart filtering, reducing selection time from 10 minutes to 30 seconds by curating personalized learning paths based on user preferences.

### Mental Health Chatbot 🔄

May 2024 - June 2024

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

- Built a conversational AI chatbot with 92% accuracy in emotional support, demonstrating capabilities to improve user interaction, similar to enhancing patient engagement in healthcare applications.

### 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, boosting user retention by 50% with personalized recommendations from a curated database of over 1 million films (1970-2023)

### Dog Breed Identifier 🔄

Jan. 2023 - May 2023

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

- Developed an accurate identification tool achieving 85% accuracy in under 5 seconds—showcasing a system built for efficient, high-accuracy results, essential in healthcare environments where quick, reliable data is needed.

## Skills

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|----------------------|--|
| • 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, SQL  |
| • Web Development    | React, Node.js, Express.js, Flask, RESTful APIs, AJAX, Bootstrap                             |
| • Tools              | Git, Jupyter Notebook, Power BI, MS Azure, Postman, Render, Sublime Text, Visual Studio Code |

## Certifications & Publications

- 2024 Exceptional Academic Excellence | Indiana State University.
- 2024 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