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