Alan Deng

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PROJECT EXPERIENCE

World Happiness Dashboard
- Developed an interactive dashboard to analyze global happiness trends, using **Python**, **SQL**, and **JavaScript** to visualize the World Happiness Index against key socioeconomic factors (population, education spending, migration). Uncovered a strong positive correlation between national education spending and happiness scores, providing valuable insights for policymakers.
- Ensured data integrity for a complex global dataset using **Python** (**Pandas**) and **SQL**. Cleaned, standardized, and merged disparate data sources to improve the accuracy and consistency of web-based visualizations, enabling reliable insights.

Pet Image Classification Model
- Designed and deployed a high-accuracy (86.67%) deep learning CNN image classifier using **TensorFlow** and **Python**, distinguishing between six pet types. Addressed class imbalance challenges through strategic data augmentation, leading to a 10% increase in classification accuracy and demonstrating expertise in optimizing model performance.
- Developed a **Python** web scraper using **BeautifulSoup** to collect 500+ pet images from Flickr and Imgur, increasing the training dataset size by 30% and improving the model's accuracy.

EXPERIENCE

BIM Coordinator   Toronto, ON
Black & McDonald Limited   Feb 2022 - Jan 2023
- Leveraged data analysis to optimize project planning, identify key performance indicators (KPIs), and foster cross-functional team collaboration, resulting in a measurable reduction in project timelines and improved overall efficiency.
- Managed and analyzed sophisticated 3D models, ensuring accuracy and timely updates to drive effective project execution and data-driven decision-making across the organization.

Sales Associate   Toronto, ON
Hercules Stainless Steel Fabrication   Sep 2015 - Present
- Optimized inventory management by monitoring and analyzing data in **Excel**, resulting in a 100% on-time delivery rate for customer orders while maintaining a minimum 30% material availability. This data-driven approach minimized stockouts and ensured efficient supply chain operations.

Education

University of Toronto School of Continue Studies   Completed Online
Data Analytics BootCamp   Jun 2023
- Mastered statistical modeling, forecasting, pivot tables, and **VBA scripting** in **Excel** to perform advanced data analysis and automate repetitive tasks
- Proficient in **Python**, **SQL**, **PostgreSQL**, and **MongoDB**, utilizing ETL processes to manage, and analyze web data from large datasets while ensuring data integrity and accessibility.

Ontario Tech University   Oshawa, ON
Bachelor of Engineering (Honors), Electrical

SKILLS & INTERESTS

Skills:Data Collecting, Data Cleaning, Data Visualization, Machine Learning, Adaptability
Languages: English(Native), Cantonese & Mandarin Chinese(Proficient), Korean(Beginner).
Interest: Volleyball, Basketball, Reading, 3D Modeling, 3D Printing, Soldering, Welding, Board Games.