Ryan Dang

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Education

The Pennsylvania State University – University Park, PA **Aug. 2020 – May 2024**

Bachelor of Science | Double Majors: Computer Science, Statistics

- **Major Related Courses (Computer Science)**: Object-Oriented Programming, Blockchain, Unix System Programming, Data Structures and Algorithms, Machine Learning, Database Management
- **Major Related Courses (Statistics)**: Probability Theory, Mathematical Statistics, Stochastic Modeling, Applied Non-Parametric Statistics, Statistical Modeling
- **GPA:** 3.94

Work Experience

Information Technology Support Specialist Intern **May 2023 – Present**

Applied Research Laboratory at Penn State

- Assisted in the administration and optimization of Atlassian suite including Jira, Confluence, and Bitbucket
- Worked on the management and maintenance of the organization's Active Directory, including user account management.
- Documented and updated technical procedures, troubleshooting guides, and knowledge base articles.
- Developed custom macros for Confluence, enhancing document functionality and streamlining content creation processes

Statistics Teaching Assistant **Aug. 2022 – Present**

The Pennsylvania State University

- Evaluated student assignments and provided thorough, constructive feedback to enhance the learning experience
- Maintained communication with both the professor and students to promote a positive and collaborative learning environment
- Designed and delivered interactive lectures, tutorials, and lab sessions, engaging students and promoting active learning
- Provided individualized support to students, offering one-on-one assistance and support with coursework as needed.

Projects

Parts of Speech Tagger **2023**

- Implemented a POS tagger employing three algorithms: Logistic Regression, Bayesian Classifier, and Support Vector Machines
- Conducted thorough data preprocessing, tokenization, and feature engineering to optimize input data for each algorithm
- Integrated word embeddings, such as Word2Vec, as additional features to augment n-gram representations
- Fine-tuned hyperparameters and conducted extensive model optimization to enhance performance and minimize overfitting.
- Utilized cross-validation methodologies to assess the generalization performance of each algorithm

Image Classification **2023**

- Implemented a robust deep learning model to effectively classify diverse image datasets of articles of clothing with high accuracy.
- Developed an innovative image classification project integrating Recurrent Neural Networks and Convolutional Neural Networks.
- Implemented dynamic learning rate schedules to accelerate convergence and improve optimization in neural network models.
- Integrated data augmentation strategies to enhance model generalization and improve its ability to handle variations in input data.
- Conducted model evaluation using metrics such as precision, recall, and F1-score to analyze the classifier's effectiveness.

Technical Skills

Programming Languages: Python, C, SQL, SAS, Java, JavaScript, Assembly Language (MIPS), R

Software: R-Studio, MATLAB/Octave, Active Directory, Minitab, Atlassian Tools (Jira, Confluence, Bitbucket), MySQL

Libraries/Packages: TensorFlow, NumPy, Keras, Word2Vec, NLTK