Ian Wesley Armstrong

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Education

Kansas State University Manhattan, Kansas Expected May 2021
Bachelor of Science in Computer Science and Applied Mathematics
- 3.56 GPA

Czech Technical University Prague, Czechia January 2019 - May 2019
Bachelor of Science in Information Technology
- Relevant Coursework: Data Mining, Introduction to Artificial Intelligence, Database Systems

Experience

Commerce Bancshares IT Intern (DevOps/ETL) June - Present
Enterprise Data Warehousing
- Automated build of containerized Data Science environments using Puppet, Kubernetes and Docker.
- Environments are built using RHEL, using Anaconda to manage Python/R packages with database connectivity to Teradata, SQL Server, S3 and Hive.
- Implemented Airflow as a job scheduler, enabling Data Scientists to develop workflow graphs and create robust pipelines for implementing models into production.

Kansas State University Undergraduate Research Assistant January 2018 - February 2019
Department of Biochemistry and Molecular Biophysics
- Contributed to the development of ORGANIC, a Python/Tensorflow framework to generate novel molecules.
- ORGANIC utilizes Neural Networks and Reinforcement Learning to bias generated compounds towards desired physical or chemical properties.
- Decreased runtime of ORGANIC by 40% on our compute cluster by altering an algorithm to improve GPU memory usage, allowing for more efficient usage of our computing resources.

Projects

Financial Data Warehouse
- Created a data warehouse for storing tick data about various financial instruments, including hourly forex exchange rates and securities present in major indexes.
- Infrastructure is managed by Kubernetes, with Airflow being used to schedule all ETL processes.
- Time-series data is stored in TimescaleDB, while unstructured data is stored in HDFS.

MLB Player Trade Evaluation
- Python Program that uses Logistic Regression and data collected using BeautifulSoup to determine if a player is likely to be traded based on their offensive/defensive statistics, salary, and length of contract.

Skills and Training

- **Languages:** Python, Bash, SQL, C/++, Java, Ruby, R, Scala, C#, MATLAB
- **Frameworks/Packages:** Puppet, Docker, Airflow, Kubernetes, SciKit-Learn, TensorFlow, Spark
- **MOOC's:** Python for Data Science, Functional Programming in Scala, Machine Learning by Andrew Ng

Extracurriculars and Awards

- College of Arts & Sciences Undergraduate Research Award
- Delta Sigma Phi Fraternity - Director of Design & Apparel
- Association for Computing Machinery - Open House Chair
- Mathematical Modelling Seminar
- Eagle Scout, Boy Scouts of America, 2014