

Ian Wesley Armstrong

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Education

Kansas State University	Manhattan, Kansas	Expected December 2021
<i>Bachelor of Science in Computer Science and Applied Mathematics, Minor in Statistics</i>		
– 3.56 GPA		
Czech Technical University	Prague, Czechia	January 2019 - May 2019
<i>Bachelor of Science in Information Technology</i>		

Experience

Commerce Bancshares	IT Intern (DevOps)	June 2019 - Present
<i>Enterprise Data Warehousing</i>		
– Automated build of containerized Data Science environments using Puppet and Docker.		
– Environments are built on top of Red Hat Enterprise Linux, using Anaconda to manage Python/R packages with database connectivity to Teradata, SQL Server, S3 and Hive.		
Kansas State University	Undergraduate Research Assistant	August 2019 - Present
<i>Department Of Finance</i>		
– Researching the correlation between a limit order book made from Nasdaq's ITCH data and tweets mentioning stock tickers to see if tweets about small cap stocks can be used to manipulate volume or price.		
– Analysis is performed on K-State's HPC cluster using Spark, Pandas and StatsModels.		
Kansas State University	Undergraduate Research Assistant	January 2018 - February 2019
<i>Johnson Cancer Research Center</i>		
– Contributed to the development of ORGANIC, a Python/Tensorflow framework to generate novel molecules using Neural Networks and Reinforcement Learning to generate compounds with desired chemical properties.		
– Decreased run time of ORGANIC by 20% by optimizing memory usage across nodes of a HPC cluster.		

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 stock indexes.
– Infrastructure is managed by Docker Swarm, with Airflow being used to schedule all ETL processes.
MLB Player Trade Evaluation
– Python Program that uses Logistic Regression to determine if a player is likely to be traded based on their historical offensive/defensive statistics, salary, and remaining length of contract.

Skills and Training

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

Extracurriculars and Awards

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- Association for Computing Machinery - Open House Chair
 - Mathematical Modelling Seminar
 - Center for Risk Management Student Fellow
 - Directed Reading Program - A Primer For The Mathematics Of Financial Engineering
 - College of Arts & Sciences Undergraduate Research Award
 - Eagle Scout, Boy Scouts of America, 2014