

# Christian Carrico

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## EDUCATION

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### Colorado State University — Fort Collins, CO

*Bachelor of Science, Computer Engineering*

*Aug. 2012 - Dec. 2017*

*Bachelor of Science, Mathematics with a concentration in Information Theory*

*Aug. 2015 - Dec. 2017*

## TECHNICAL SKILLS

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<b>Programming:</b>	Python	Java	C	C++	Julia
<b>Web Development:</b>	C#	JavaScript	SQL	jQuery	HTML & CSS
<b>Additional:</b>	Git	JIRA	OpenMP	MPI	Jupyter Notebooks

## PROJECTS

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### Scalable M&S ETL Pipeline

- Implemented several prototype pipelines using open-source frameworks like Apache Storm, Apache Beam, and Apache Airflow
- Achieved a speed up improvement of 12x using Python's multiprocessing library
- Bundled the pipeline as a Python package to deploy and scale across a Dockerized M&S environment

### Workflow Planning Web Application

- Supervised sprint planning for a .NET application used to manage COCOM exercise planning
- Completed frontend and backend development tasks to incorporate new features like email notifications and tasking functionality
- Dramatically improved codebase quality by refactoring C# controller functions and standardizing JavaScript web views

### Data Warehouse Design Study

- Conducted a systematic trade study for to compare commercial off-the-shelf data storage and pipeline solutions
- Deployed and integrated promising tools with Amazon Web Services to prototype a management system for petabyte-scale Modeling & Simulation data

### Operational Data Parsing Tool

- Spearheaded development of a Python tool to parse data from structured and unstructured sources into Operational Testing reports
- Utilized the Agile methodology to deliver continuous updates to functionality during a critical test period

### Snowflake Classification Project

- Trained a machine learning model to classify snowflake images for a CSU research group
- Improved the research group's previous classification rate by 15% using an ensemble of neural networks

### Kaggle Data Science Bowl 2019

- Organized a team of coworkers for the current on-going Data Science competition
- Conducted initial data exploration and formatting using Jupyter Notebooks, Pandas, and other Python libraries

## EXPERIENCE

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### CCDC AvMC: Athena Lab — Colorado Springs, CO

*Computer Engineer*

*Apr. 2018 - Present*

- Maintained an active Secret level security clearance: 2014 - present
- Drove development of several lab projects as the government lead by coordinating contractor and government efforts
- Improved project deliveries by capturing customer requirements into JIRA and organizing sprints for new project features
- Evaluated small business proposals for technical merit on behalf of the Missile Defense Agency
- Engaged with small businesses as a Te to monitor progress and provide technical guidance on contract requirements
- Mentored student interns by delegating noncritical tasks that contribute to the mission and individual growth

### CSU Linear Accelerator Research Lab — Fort Collins, CO

*Engineering Intern*

*July 2012 - May 2013*

- Developed a website to capture the Accelerator Lab's research and faculty for public consumption
- Gathered materials for the lab's public image by interviewing professors and graduate student teams

### Electrical & Computer Engineering College — Fort Collins, CO

*Student Ambassador*

*Aug. 2012 - Aug. 2014*

- Lead ECE department activities as an example of the departments students to educate and encourage potential freshman