

Jessica Rae Chipera

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Career Profile:

Data Scientist and mathematician with more than 10 years of experience developing novel solutions to complex data science problems in business, marketing, finance, metals / mining and counter-terrorism in the civilian and military sectors. Able to get a security clearance.

Download some of my papers, code, etc. at: www.jessicachipera.com/portfolio

Core competencies include SQL, Python, machine learning, statistical analysis, leadership, time management, research, writing papers, and teaching

Experience:

2018-Present

Data Scientist / Epigram Financial Services, Albuquerque, NM

- Worked as a team and solo using SQL, Python and Exploratory Data Analysis, and in doing so:
 - Planned, created, and implemented regression models and other complex models with SQL and Python for asset valuation and risk management
 - Created deliverables
 - Saved 5+ businesses from bankruptcy by advising the decisionmakers on marketing, financial & business strategy, supply chain issues, and labor use
 - Advised 100+ new entrepreneurs about raising capital
 - Utilized cloud technologies
- Volunteered data science services to Task Force Argo and other organizations devoted to getting Americans and allies out of Afghanistan post-withdrawal

2011-Present

Data Scientist & Investment Placer / Guidon Company

- Used Python, APIs and machine learning to develop novel solutions to complex problems, detect changing current trends, and manage risk. In doing so:
 - I lowered our fund's sensitivity to downside market risk by 50%
 - My models avoided the entire Covid-19 market crash in March 2020 by positioning against oil and the S&P500 as a whole
- I am an established subject matter expert at analyzing and trading stock and derivative securities of metals and mining companies in the green energy space
- Modeled and coached teammates on derivative spread trading strategies

- Oversaw and trained a team of analysts to think outside the box on finding opportunities and building algorithms that predict changes in supply and demand of commodity supplying companies
- Conducted hypothesis testing to develop exit and adjustment strategies for investments and trades
- Created and implemented custom random forest and recommendation algorithms using physics and statistics formulae together to look for new investment trends as well as the corresponding risk management techniques

2010-2011**Senior Data Manager / US Marine Corps, Camp Pendleton, CA**

- Built a database to streamline deployment support
- Created a database to streamline management of an inventory of \$3 million of weapons and equipment
- Trained 20 junior Marines on antennae science, counter-terrorism network analysis, and algorithm use, depending on mission importance
- Created a training system for junior Marines to learn data management and collection software

2006-2010**Cryptologic Data Scientist / US Marine Corps, Western Iraq**

- Used data science to collect intelligence
- Supervised a team of 4 in collection and analysis of time-sensitive, top-secret data in a stressful environment
- Oversaw and contributed to production of 1,000+ intelligence reports, briefed senior US civilian & military officials including the President once
- Created 5 military target packages using counter-terrorism network analysis

Education:**PhD Candidate – Data Science / Northcentral University, Scottsdale, AZ****MBA – Finance / National University, La Jolla, CA****Data Science & Machine Learning Executive Certification / Massachusetts Institute of Technology, Boston, MA****BBA – Marketing / National University, La Jolla, CA**

Skills:

SQL, Python, some R, KNIME, MySQL, exploratory data analysis, data scraping, APIs, machine learning, clustering algorithms, regression, decision trees, random forests, neural networks, recommendation systems, MS Office, Amazon Web Services, advanced statistics, asset valuation, measure theory, functional analysis, vector calculus, some Spanish, some Arabic