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# Michael Galarnyk

github.com/mGalarnyk  
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mgalarnyk.github.io

## EDUCATION

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University of California, San Diego

M.S. Computer Science (Data Science)

2017

B.S. NanoEngineering, Minor Biology

2015

## SKILLS

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Programming:	Python (pandas, sklearn, PySpark), SQL, MATLAB, Bash Shell Scripting, JavaScript, HTML, CSS, C++
Database Management:	Amazon AWS (EC2), MSSQL, PostgreSQL, MySQL
Operating Systems	Linux (Ubuntu, Red Hat), Windows, Mac
Other Technologies:	Hadoop, HBase, Spark (PySpark), Tableau, IPython, Jupyter, Git, LaTeX, SolidWorks, AutoCAD

## EMPLOYMENT

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DUV Systems Engineering Intern (Data Analysis) at Cymer

Summer 2015

- Designed MATLAB GUI tools to automate SQL queries (MSSQL) and to automatically generate data reports.
- Reduced average SQL query time by ~27% for Cymer GUI tools.
- Presented to CEO and earned my coworkers recognition at the Cymer All-Hands Meeting

Researcher at UCSD NanoBioElectronics Lab

2013-2015

- 9 coauthored publications in peer reviewed journals, 120+ citations (h-index: 7), 1 publication featured on cover
- Gathering and analyzing data using MATLAB and Python (NumPy, pandas)
- Graphic Design/SolidWorks Modeling for schematic illustrations in peer-reviewed journals and new organizations (BBC, Nanowerk)
- Publications: mgalarnyk.github.io/publication\_list.html

## RELEVANT COURSEWORK SAMPLE

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Python for Data Analysis	Machine Learning
Probability and Statistics using Python	Data Analysis using Hadoop and Spark
Data Management Systems (DBMS)	Python for Informatics
Tableau for Data Visualization	

## TECHNICAL WORK SAMPLE

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PCA, K-Means on Animals with Attributes Dataset

- Bash scripting, PCA and K-means using sklearn, hierarchical clustering (scipy), showed the position of each animal using matplotlib
- Code: mgalarnyk.github.io/Clustering.html

Twitter API for Sentiment Analysis

- Python based API to collect streaming data of live tweets
- Sentiment analysis using TF-IDF
- Code: mgalarnyk.github.io/Twitter.html

ETL & Analysis of Ebola Data

- Scraped and cleaned Ebola data from the World Health Organization
- Python (NumPy, pandas, matplotlib) based analysis on the data

Relational Database for Sales Data

- Designed and optimized database schema using E/R diagrams (Cube Schema)
- Created database on Amazon AWS instance (EC2)
- Reduced query and maintenance cost by using optimized relational algebra, indices, and materialized views.

Relational Database for Cats Data

- Designed and optimized database schema using E/R diagrams (Star Schema)
- Created database on Amazon AWS instance (EC2)
- Reduced query and maintenance cost by using optimized relational algebra, indices, and materialized views.

Pokemon Battle Game

- HTML, CSS, Javascript, and JQuery
- Game: mgalarnyk.github.io/web\_development/pokemon/index.html