Christopher **Burch**

DATA SCIENTIST AND CONSULTANT
Fredericksburg, Virginia

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Summary

An experienced data analyst and team leader. I take pride in transforming data into business insight and building teams that perform as more than the sum of their parts.

Experience

Grant Leading Technology

DATA SCIENTIST AND CONSULTANT   *2018 - Present*

- Technical lead for FAA property data visualization, covering more than $9 billion in managed property.
- Built machine learning models to analyze and predict vehicle fleet fuel use, mileage, and accident rates, resulting in improved FAA vehicle training policy.
- Wrote and maintained open-source R packages to interface with existing Federal APIs, improving FAA reporting automation and reducing errors.
- Managed development of the FAA-wide vehicle recall status tracking system, reducing outstanding vehicle recalls by 90%.
- Applied systems theory to model complex interactions between business units, and proposed workflow process improvements based on those models.
- Wrote, built, and administered rollout of a new company-wide employee evaluation system.

Cogentis Therapeutics

COFOUNDER / CHIEF DATA OFFICER   *2014 - 2018*

- Developed financial models which reduced investor risk and controlled experimental risk for increased stability in the startup ecosystem.
- Created company data standard operating procedures (SOP), code books, and data dictionaries.
- Prepared data visualizations for company communication, publication, and grantwriting.

US Army 20th Special Forces Group

ADVANCED SKILLS INSTRUCTOR   *2009 - 2011*

- Senior CQB/Close Combat Instructor for US Army, US Navy, and NATO forces in close quarters combat (CQB), fighting in built-up areas (FIBU), advanced urban combat (SFAUC), and advanced special operations (ASO).
- Lead a team of 5 – 10 junior instructors; responsible for subordinate instruction in firearms and small unit tactics proficiency, range preparation, and field exercise coordination.
- Developed a metrics-based training evaluation system to A/B test multiple techniques.

US Army 10th Special Forces Group

SPECIAL FORCES COMMUNICATIONS NCO   *2004 - 2009*

- Trained and advised more than 2,000 foreign military and police force personnel in patrolling, advanced urban combat, marksmanship, and mission planning.
- Participated in more than 250 named missions across Afghanistan, Africa, and Eastern Europe in support of US and NATO counterterrism efforts.

Education

Massachussetts Institute of Technology

MICROMASTERS CERTIFICATE   *2015-2017*

- Graduate training in Data, Economics, and Developmental Policy (DEDP)

Johns Hopkins University

MASTER OF BUSINESS ADMINISTRATION   *2013-2015*

- Double Specialization in Enterprise Risk Management (ERM) and Marketing

Arizona State University Global Campus

BACHELOR OF ARTS, ORGANIZATIONAL MANAGEMENT   *2011-2013*

- SALUTE National Honors Society

Current Certifications

Certified Professional Property Specialist (CPPS)
NATIONAL PROPERTY MANAGEMENT ASSOCIATION

Lean Six Sigma Yellow Belt
GRANT LEADING TECHNOLOGY

Certified Risk Analyst (CRA)
GLOBAL ACADEMY OF FINANCE AND MANAGEMENT

Memberships

ASTM International
VOTING MEMBER ON SUBCOMMITTEES FOR SAMPLING/STATISTICS, DATA MANAGEMENT, FLEET MANAGEMENT

National Property Management Association
MEMBER, FEDERAL CHAPTER

Data Science Council of America
MEMBER AT LARGE

Awards

MassChallenge
FINALIST   *2020 & 2016*
- Startup incubator and business model contest. Selected as a Top 20 Finalist, the incubator's highest honor, from more than 500 startups from across the globe.

Neuro StartUp Challenge
1ST PLACE   *2015*
- NIH / Oxbridge - funded competition to develop existing NIH patents.

Wake Forest Business School Business Case Competition
1ST PLACE   *2015*
- Biotech business case competition with Boston Scientific.

Federal Bureau of Investigation
DIRECTOR'S AWARD FOR EXCELLENCE   *2014*
- First unit outside of the FBI to recieve this award.

US Army
BRONZE STAR MEDAL   *2009*
- Awarded for combat actions in Logar, Afghanistan.

Publications

1. Burch, C. (2020). *Altfuelr: An interface to the nrel alternate fuels locator.* `https://CRAN.R-project.org/package=altfuelr`

2. Burch, C. (2020). *Vindecodr: An interface to the us department of transportation vin decoder.* `https://CRAN.R-project.org/package=vindecodr`

3. Burch, C. (2021). *Excelstrippr: Extracts tabular data from excel reports.* `https://CRAN.R-project.org/package=excelstrippr`