

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. I'm looking for work with a purpose that also provides a challenge.

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 counterterrorism efforts.

Education

Massachusetts 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 Risk Management 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

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 receive 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>