# Cristopher Benge

Principal Data Scientist ✎ Engineering Manager

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## Education

**Columbia University in the City of New York** *New York, New York*
Master of Science, Computer Science (Machine Learning) *Exp. 2023*

**University of California, Berkeley** *Berkeley, California*
Master of Information and Data Science *May 2021*

**Indiana Wesleyan University** *Marion, Indiana*
Bachelor of Science, Business Information Systems *Apr. 2012*
Associate of Science, Business *Apr. 2006*

## Skills

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|---|---|
| **Programming** | Python, R, C#, JavaScript, PowerShell, LaTeX, Markdown |
| **Machine Learning** | PyTorch, Keras/TensorFlow, LightGBM, XGBoost, Catboost, scikit, Azure ML, Spark MLlib |
| **Data Platforms** | SQL Server, Analysis Services, Azure Synapse Analytics, Cosmos DB, Azure Data Lake, S3, Redshift |
| **Data Visualization** | Power BI, Tableau, Plotly, ggplot, Seaborn, Matplotlib, Bokeh, Altair, D3.js |
| **Cloud Platforms** | Microsoft Azure, Amazon AWS, Google GCP |
| **Miscellaneous** | Research Design, Data Engineering, Data Warehousing, Statistics, Communication, Leadership |

## Experience

**Microsoft** *Indianapolis, Indiana*
Principal Data Scientist Manager (Azure Cloud + AI) *Oct. 2020 - PRESENT*

- Manage five data science teams for the Azure CHIE Executive Office focused on developing and improving quality of analytics, machine learning, automation, custom tools, and data-driven solutions to the worldwide hardware engineering organization.
- Design of experiments, regression analysis, machine learning, data-product solution architecture, and storytelling with data to executive leadership to give insights into the business.
- Lead special projects on behalf of the Azure CHIE Executive Office, managing extended virtual teams across the organization to deliver on creation of new data capabilities and analytic products within the worldwide hardware engineering organization.
- Identify, recruit, professionally develop, mentor, and retain talented data professionals for the Azure Cloud + AI organization.

**University of California, Berkeley** *Berkeley, California*
Graduate Teaching Assistant (Machine Learning Systems Engineering) *Jan. 2022 - May 2022*

- Serve as teaching assistant for the MIDS Spring 2022 semester, DATASCI W255: Machine Learning Systems Engineering.

**Microsoft** *Indianapolis, Indiana*
Senior Area Solution Architect (Office of the U.S. Healthcare CTO) *Jan. 2019 - Oct. 2020*

- Provided solution architecture and technical consultation on data science, machine learning, and business intelligence for Microsoft Healthcare customers in the U.S. commercial and federal civilian sectors.
- Guided customers on their digital transformation both in the cloud and into machine learning on the Azure platform.
- Served as an AI ambassador within Microsoft, educating our business leaders and sales executives on modern data science technologies and solutions.
- Qualification, technical deal shaping, demonstrating business value, early-stage architecting, and building speculative solutions using emerging technologies.

**United States Senate** *Washington, District of Columbia*
Principal Systems Engineer (Office of the Sergeant at Arms and Doorkeeper) *Aug. 2015 - Jan. 2019*

- Served as team lead for the SQL Server solutions area of the Enterprise Data Services section, responsible for all data and analytic needs of the U.S. Senate offices, committees, and applications.
- Created POC's and led the implementation of mission-critical architecture changes to ensure fully automated [geographic] disaster recovery, continuity of operations, and performance monitoring of all data assets.
- Led the research and development of experimental machine learning initiatives, particularly in the areas of IT operation predictive maintenance and automation of tasks.
- Implemented geographically-scaled analytics platforms to all U.S. Senate offices and provided consultation on development, design, security, and performance needs.

**Microsoft**                                                     *Stuttgart, Germany / Kuwait, Kuwait*

Senior Premier Field Engineer (Defense Industry, EMEA)            *Aug. 2014 - Jul. 2015*

- Provided engineering in the field for Microsoft SQL product team in support of the U.S. Army unified combatant commands in Germany and Kuwait.
- Developed enterprise data warehousing and reporting solutions built to facilitate management of command telecommunications for all directorates.
- Planned and developed multi-site & multi-country continuity of operations solutions for military operations in Germany, Kuwait, and the United Kingdom. Performed root-cause analysis, remediation planning, knowledge transfer, and training of security compliance mechanisms.

**Microsoft**                                                     *U.S. Various (Travel)*

Senior Consultant II (Consulting Services, U.S. Commercial & Public Sector)    *Aug. 2005 - Jul. 2014*

- Provided consultation on database design, data warehousing, business intelligence, and data platforms architecture to U.S. commercial customers of Microsoft. The primary customer profile with commercial sector was Healthcare-focused, typically in the pharmaceutical or payor vertical.
- Transitioned to the U.S. Public Sector team in 2010, where focus shifted to designing data solutions for organizations and agencies within the U.S. Federal Civilian, Defense, and Intelligence community.

**Alcoa**                                                         *Indianapolis, Indiana*

Data Warehouse Developer (1099 Contract)                          *Jun. 2001 - Aug. 2007*

**Powerway.com**                                                  *Indianapolis, Indiana*

Database Architect                                                *2000 - 2001*

**American Health Network**                                       *Indianapolis, Indiana*

Database Developer                                                *1999 - 2001*

**Anthem Blue Cross Blue Shield**                                 *Indianapolis, Indiana*

Systems Administrator                                             *1996 - 1999*

## Honors & Awards

### Competition

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| 2019 | **1st Place,** Identifying World Bank Publication Topics (NLP, multi-label, multi-class, multi-language) | *DrivenData* |
| 2018 | **Top 12%,** Data Science Bowl - Find the Nuclei in Divergent Images (Vision, instance segmentation) | *Kaggle* |
| 2017 | **13th Place,** Predict Futures Sales for the 1C Company (Regression, time-series) | *Kaggle* |
| 2017 | **1st Place,** Department of Education - Predicting College Graduate Earnings (Regression) | *DrivenData* |

### Employer

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| 2020 | **Circle of Excellence: Platinum Club,** Microsoft's highest annual employee award for performance | *Microsoft* |
| 2020 | **Champion Award (Q3),** Microft's highest quarterly employee award for performance | *Microsoft* |
| 2020 | **Hero Award,** Microsoft's highest monthly employee award for performance | *Microsoft* |
| 2019 | **#BetterTogether Award,** Recognition for leading a diverse, high-performing v-team | *Microsoft* |

## Certifications & Credentials

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| **Amazon** | AWS Certified Solution Architect (AS) |
| **Microsoft** | Certified: Azure Data Scientist, Certified Azure Solution Architect (Expert), MPP: Data Science, MPP: Artificial Intelligence, Certified Solutions Master: SQL Server (MCSM), Certified Master: SQL Server (MCM), more (see LinkedIn) |

## Publications

**A High-Performance Compression Approach for Transformer-Based NLP Tasks**      *Unpublished*

Graduate Research                                                               *May 2021*

- Paper can be viewed here on my portfolio.

**BERTVision: A Parameter-Efficient Approach for Question Answering**           *ArXiV*

Graduate Research                                                              *Feb 2022*

- Paper can be viewed here on ArXiV.
- GitHub repository & project page is open to the public.