# Brian Hogan, M.S.

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#### **EDUCATION**

Syracuse University, Syracuse, NY M.S. Applied Data Science

Boston College, Chestnut Hill, MA

M.S. Sociology, Statistics.

Matriculated. Incomplete because of work relocation.

Studying multivariate and theory.

Harvard University, Cambridge, MA

C.S.S., Business Administration, Harvard Extension School Eight full-term, in-person classes.

Babson College, Wellesley, MA

B.S. Business Administration

Departmental Degree in Psychology, Wellesley College

Sept 1989 - May 1993

Sept 1997 - June 1999

Sept 2018 - Dec 2020

Sept 2000 - May 2001

#### TEACHING EXPERIENCE

### Adjunct Faculty

Department of Computer Science Southern New Hampshire University, Manchester, NH Instructional responsibilities include

- Perform semiweekly in-person 1.25-hour pedagogical lectures.
- Deliver curriculums with pace, agility, and activities students love.
- Perform contracted instructional design to enrich course objectives.

<u>IT 226</u> Communication in STEM Professions Southern New Hampshire University

Spring 2023

Feb 2022 -

- Instill a love for vocabulary learning and quality penned items.
- Adapt course to address paradigm shift realized with ChatGPT.
- Formulate approaches to achieve specific and precise conclusions for interpersonal relations in business.
- Relay natural language processing and text mining fundamentals in information extraction, retrieval, and corpora statistics.
- Designed a write-and-reflect process of diverse weekly readings to gather polysyllabic words and experience topic formation with LDA.
- Learner building a word syllable tree cheatsheet to facilitate the formation of polysyllabic words in multiword phrases. The dual strategy is to educate on a trick pony effect achieved against AI plagiarism scoring algorithms.
- Instruct on use of word syllable <u>tree</u> cheatsheet to facilitate the formation of polysyllabic words in multiword phrases. The strategy educates on a trick pony effect against AI plagiarism algorithms.

<u>IT 304</u> Systems Design and Analysis Southern New Hampshire University Fall 2022

- Form a system analysis mindset across ten design methodologies.
- Perform reverse engineering of physical systems such as DataMan.
- Course informally acknowledged by two students as semester <u>favorite</u>.
- Word of mouth materialized "Gabriel," who attended for 1.5 months.

Tutor

Data Science and Programming https://tutormatchingservice.com

2019 - 2020

• <u>Tutored</u> in data science in both R and Python, including text and data mining, machine learning, statistics, and visualization via ggplot2.

Corporate Trainer

Data Science and Discrete-event Simulation Curriculum 2004 - 2014
ProModel Corporation, Orem, UT

Delivered in-person simulation training ~5-7 times per year for ongoing concerns such as Lockheed Martin, Merck, NASA, Pfizer, and West Point.

Riding Instructor

Equestrian field sports

2002 - 2012

Gone Away Farm, Voluntown, CT (part-time)

- Trained adults and junior horse riders to perform field jumping sports and high-end performance animal sport's care.
- Raised, trained, and sold 28 performance animals.

#### INSTRUCTIONAL DESIGN AND TECHNICAL CURRICULUM DEVELOPMENT EXPERIENCE

Curriculum Developer, ICARUS AI E-Learning, Santa Monica, CA

Nov 2022 - Jan 2023

Course author: >\_7.py.pillars

- Formulated an innovative Python learning module to address deficiencies in current literature.
- Designed for learners to experience plasticity with data transformation and grok coding of iterators, conditions, and classes.
- Target audience is new learners and programmers who struggle with datacasting and data transformation.
- Secured the inclusion of the course on ICARUS-AI's learning platform.
- Performing course optimization for its E-Learning delivery.

Instructional Designer and Writer, Southern New Hampshire University, NH Oct 2022 - Jan 2023

<u>IT-226</u> Communication in STEM Professions (undergraduate)

- Update curriculum with information policy research, ethics theory, sentiment exercises, and NLTK library to experience parts of speech.
   <u>IT-304</u> Systems Design and Analysis (undergraduate)
- Performed instructional design by building learning objectives, weekly lectures, Python training materials, and class projects.

Technical Content Writer, Learning Lab, Google Inc, (via synergis), NY, NY 03/2022 -11/2022 Course: Google Advanced Data Analytics Certificate 2023

- Performed the lead writing and programming in a Python 6-part course.
- Built training and staged knowledge for skilling in data objects, conditionals, functions, iterators, transformations, and classes.
- Edited scripts to ensure nomenclature and constructs across media.
- Created two course capstone projects requiring knowledge of cross course machine learning and statistical analysis methods, including

(continued) simple regression, multiple linear regression, logistic regression, classification, and cross-validation.

- Drafted 21 knowledge readings, ten codebooks with >3000 lines, four course projects, three self-reviews, and tether filming code scripts.
- Trained in 18 E-Learning multimedia asset designs such as discussion prompts, peer reviews, readings, vignettes, and quizzes.

Technical Writer and Illustrator II, Alert Innovation, Billerica, MA Nov 2021 - Mar 2022

Department: Learning, Training, and Development

- Interviewed operation owners and engineers to draft and update documentation for quality robotics and its operating structure.
- 12 maintenance manuals, 11 service procedures, and two user manuals.

### Content Writer

# EXPO Summer Programs, Norwood, MA

Apr 2021 - June 2022

Department: Learning, Training, and Development

- Designed a 1-week course on AI foundations, ethics, and use cases.
- Provided 50 pages, 10,821 words, for in-person instructor training.

## Curriculum Developer, ProModel Corporation, Orem, UT

2004 - 2014

Department: Consulting

Performed instructional design, technical curriculum development.

- Lockheed Martin, San Antonio, TX. Customized simulation course for scheduling plant for F-18, F-22, and F-35 Lightning engine overhaul.
- NASA, Kennedy Space Center, Titusville, FL. Customized discrete-event simulation curriculum to suit optimizing paper-to-image workflow capacity and critical diagnostic equipment requirements. Curiously, engineers completed five days of complex materials in two.
- NASA, Washington, DC. Built curriculum and logic for SaaS solution modeling diverse space asset project portfolio for quarterly forecasting of a 20-year personnel and equipment budget.
- <u>West Point</u>, West Point, NY. Curriculum development and in-person training for modeling war-based resources and logistics.

#### PROFESSIONAL EXPERIENCE

## Scientific Editor

Data science topic focus

Jul 2020 - Jun 2021

Accdon, LLC (Publishing Services), Woburn, MA

- Passed exam and completed language editing training.
- Edited three manuscripts for peer-review journal publication.

### Industrial Engineering and Simulation Consultant

Mar 2004 - Jan 2016

ProModel Corporation, Orem, UT

In a leadership capacity, performed business process <u>reengineering</u>, including data science, application development, simulation instruction, and system implementation in the defense, manufacturing, and pharmaceutical industries. Activities included

- Performed strategic assessments, project management, and the as needed management of developers and wrote specifications.
- Performed C++ coding and built designs using ERD, EER, DFD, and IDEF0.
- Performed demand and capacity planning, resource and budget forecasting, and program management.
- Experienced a range of tactical to strategic reengineering efforts.
- Security clearance.

Research Volunteer 23-bed, 63-nurse and associate acute care floor

June 2021 - Jan 2022

Winchester Hospital, Winchester, MA

Manager: Debra Barbuto, RN, MSN

Investigated the efficacy of evidence-based practice purposeful hourly rounding on patient falls and length of stay satisfaction.

- Designed the data collection and encoded three months of daily patient measurement data.
- Performed REDCap API data transfer training in R software with the CRAN data.table package.
- Outcomes: associate chief nursing officer presented the methods, viability, and benefits of adopting purposeful hourly rounding. Assisted in evaluating call bell signal standardization across units to help distinguish noncritical care requests from critical requests.
- Located call bell system parts but wasn't able to upgrade the system.

#### SKILLS

- Cloud: performing Google certification for Machine Learning Engineer.
- Languages proficient: Python, R, and VBA.
- Languages advanced to proficient: C++, SQL, and Visual Studio.
- Languages familiar: Linux, HTML, Java, SMSS, SQL, and XML.
- Representational State Transfer (REST) APIs with Facebook, REDCap, and Twitter.
- Libraries: caret, e1071, ggplot2, klar, pandas, sci-kit-learn, and Tensorflow2.
- NLP proficient: strip/regex, information extraction, detection, negation, and sentiment.
- Multimedia: Photoshop, Illustrator, Help/Manual, LaTeX, Markdown, some Shiny & Sphinx.
- Research (adequate): X9 bibliographic database, literature review and summary.

#### **INSTRUCTIONAL READINESS**

# Machine Learning, Systems, and Programming

- Intro to advanced Python and R.
- Systems analysis theory and design methodology.
- Text and image mining with algorithm theory and compute libraries.
- Introduction to natural language processing with scripting.
- Introduction to database administration concepts and management.

### **Statistics**

- Bayesian suitable to instruct with existing university materials but would require time and or assistance if needed to construct.
  - o Classwork: Stanton, J. (2017). Reasoning with Data An Introduction to Traditional and Bayesian Statistics using R.
  - o Personal: Marin, J-M et al. (2014). Bayesian Essentials with R.
    - Topics: inference, ANOVA, association, multiple regression, categorical, time series.
- Frequentist statistical theory, classification, convolutional neural networks, decision tree, linear regression, logistical regression, multiple linear regression, principal components analysis, probabilistic, support vector machine, and unsupervised.

#### Google Cloud, Machine Learning Engineer Certification in progress

November 2022 -

- 15 courses for professional certification.
- https://www.cloudskillsboost.google/paths/17. Account ID: b.hogan@snhu.edu.

# Google Learning Lab, Multimedia Asset Design Training

Mar 2022 - July 2022

- Performed E-Learning multimedia training, including segmentation, personalization, cognitive load balancing, Flesch Kincaid measuring, contiguity, and signaling.
- Performed self-paced and team training on the design of 18 multimedia E-learning assets such as case studies, peer reviews, readings, vignettes, and quizzes.

### Amazon Web Services, Account ID: FpfKzlcOwkmK4YPzjMp3JA2

2020

- Performed <u>training</u> on the platform's stack across 14 academy classes, seven live <u>twitch</u> videos, and books by experts <u>J. Simon</u>, and <u>C. Fregly</u>, <u>A. Barth</u>.
- Invited for a third data engineering position interview but not selected.

#### Scientific Language Editing, AccDon, Woburn, MA

June 2020 - Sept 2020

• Performed editing training in two language editing style guides.

Data Science Specialization Certificate, Johns Hopkins University via Coursera 2016 - 2017

https://www.coursera.org/specializations/jhu-data-science

### Edward Tufte: Analyzing and Presenting Data and Information

1999

• Cognitive Style of PowerPoint

Hammer and Company: Reengineering Process Mastery, www.hammerandco.com

1997 - 1999

## **RESEARCH INTERESTS**

- I. Mining for insights and residue from e-data.TRASH and.or e-nonsense.
  - Anthropology makes regular use of waste to glean insights and classifications.
    - Fascinated by the agency of e-trash, discarded e-remnants, and gibberish.
- II. Use of long-format podcasting as essential content for computer science literacy

National policy pursuits are focused on requiring computer science as a highschool graduate requirement (Bass & De Jong, 2021). A complimentary argument exists for including a critical podcast analysis curriculum to facilitate computer science literacy. Consider

- In the 1960s and 1970s, there was the challenge of the space race to fuel content for learners.
- At present, multimedia learning modalities are expanding exponentially. Machine learning experts, such as Lex Fridman (<a href="https://lexfridman.com/">https://lexfridman.com/</a>), provide deep and wide content to broaden young learners' knowledge framework.
- Every week, churns fresh, baked, and well-researched content from industry juggernauts who also provide pulse, pace, interest, and taste.
- Is not this vine's fruit ripe for sampling?

- III. Artificial intelligences use of multisyllabicity for human conversation captivation.

  Similar to a magician's sleight of hand, I posit the ability of conversational

  AI to manipulate humans using multisyllabic words.
  - For example, in a lecture, I described a specific system, "propensity." By happenstance, a student was bewildered, maybe even dumbstruck, as it took a few minutes for them to ask for clarification.
  - Suspects and criminals have a long history of obfuscation. Analysis
    of their methods could help form artificial intelligence
    countermeasures of such persuasion tactics with "big words." Unsure
    but may reside under the umbrella of AI ethics and fairness.

#### **ADVISING**

Career Advisor First Hand Advisors

2021 -

Office of Career Services, Harvard University

• Provide free reviews of university student's resume, curriculum vitae, and career portfolio. At present assisting zackF.

**Graduate Advisor** 

Nursing, Programming Fundamentals, and Research Papers 2017 - 2018 Self-employed, Greater Boston Area

- Scheduled and advised graduates on their topic research, survey design, use of scales, editing, and statistics.
- Developed a student's writing and logic across nursing research papers, fact sheets, and healthcare policy assessments.

### MENTORING EXPERIENCE

Name	Institution	Department	Mentoring Focus	Date	Current Position
Teddy <u>Mbuthi</u> ^	Alert Innovation	Information Technology	Portfolio, personal statement, training.	Feb 2022 - present	IT Analyst II
Selena Washington	Winchester Hospital	Inpatient Services	TEAS exam tutoring for nursing school	Oct 2022 - - present	Certified Nurse Assistant
Harrison X	Sober House		GED tutoring	May 2020 - July 2020	

<sup>^ &</sup>lt;<u>Year Up</u> high-school workforce graduate>

#### **AWARDS & HONORS**

A. foobar participant, Google, Inc

Spring 2022

- Deep Python and Linux research yielded an invitation to this elusive challenge.
- B. Golden Key International Honour Society, Member

October 2020

## Study Participant, ClinicalTrials.gov Identifier: NCT05058950

Oct 2022 -

An Observational Study Using Multimodal Sensors to Measure Cognitive Health in Adults and Distinguish Mild Cognitive Impairment from Normal Aging (Intuition).

• Measure cognitive performance and create a wellness score from iWatch multimodal passive sensor data. Fascinated by the agency of biometrics and biomimetics.

## Wikipedia Language Editor and Article Creator

Aug 2022 -

Contribute by performing weekly editing and adding class based research articles.

### Trash to Treasure, Winchester High School Art Department, MA

11/2020 - 09/2021

- Jackson Lumber and Millwork, Manager Geoff MacKay, Woburn, MA
- Gathered cutoffs, paint, and supersize cardboard for chair Jenn Levatino.

### Mechanical Turking, amazonmturk, ID = A3IWDP1WNMWVR8

2020 - 2021

- Participated to learn the benefits of crowdsourcing research methodologies.
- Performed work on 1017 Human Intelligence Tasks and human subject activities.
- Achieved a 99.03% approval rating by working on classification, extraction validation, shape memory, and automated speech assessment exercises.

#### REFERENCES

## Shyna Gill

Manager, Curriculum Quality Assurance at Stride, Inc Content Writer at Google, Learning Lab <a href="https://www.linkedin.com/in/shynagill/">https://www.linkedin.com/in/shynagill/</a>
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541-908-0560

## Jim McCoy

Instructional Designer at Google, Learning Lab Grow with Google Career Certificates
Advisory Board at University of Houston
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832.661.7145

### Robert K. Stephens

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#### Nathan Sorenson

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Thank you for considering Professors Kahn's reference material below.

I remain deeply grateful to each of the following people for their generosity and time in recommending me for teaching and writing positions.

- <u>Professor Humayun Kahn</u>, MS, MBA (DPS program recommendation)
- Professor Humayun Kahn, MS, MBA (technical writer position reference)
- Dr. Mitchell Kase, MD
- David Primrose, MS, Oracle Cloud Leader, academic peer
- And Debra Kernstock, MS, Katie Poole, MS, Professor Ralph Garcia-Reilly, and Professor John Santerre, PhD

### **CITATIONS**

Bass, E., De Jong, D, (2020). Computer Science Courses as a Graduation Requirement at the State and National Level: A Policy Brief. International Journal of Educational Leadership Preparation, v15 n1 p126-133 Spr 2020. Retrieved from: <a href="https://eric.ed.gov/?id=EJ1254594">https://eric.ed.gov/?id=EJ1254594</a>.