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EDUCATION

Syracuse University, Syracuse, NY   Sept 2018 - Dec 2020
     M.S. Applied Data Science

Boston College, Chestnut Hill, MA   Sept 2000 – May 2001
     M.S. Sociology, Statistics. Matriculated; incomplete; work relocation.

Harvard University, Cambridge, MA   Sept 1997 -June 1999
     C.S.S., Business Administration, Harvard Extension School
        Eight full-term, in-person classes.

Babson College, Wellesley, MA   Sept 1989 – May 1993
     B.S. Business Administration
        Departmental Degree in Psychology, Wellesley College

TEACHING EXPERIENCE

Teacher   **ICARUS AI E-Learning**, 100 Wilshire Blvd, Santa Monica, CA   12/22 –
- Augment skilled based AI questions per population behavior metrics.

Technical Writing with ChatGPT (new)
Build approaches to achieve specific and precise technical writing conclusions by partnering artificial intelligence with polysyllabics.

> 7.Pillars.of.Python
Python coding essentials course to skill in data objects and data transformation by coding iterators, conditionals, and functions using class objects to request and deliver requested outcomes.

Adjunct Faculty   **Department of Computer Science**   02/22 –
Southern New Hampshire University, Manchester, NH
- Perform semiweekly in-person 1.25-hour pedagogical lectures.
- Deliver curriculums with pace, agility, and activities students love.

IT 226 Communication in STEM Professions   Spring 2023
Southern New Hampshire University
- Instill approaches to achieve specific and precise conclusions in interpersonal relations in STEM professions.
- Relay natural language processing and text mining fundamentals in information extraction, retrieval, and corpora statistics.

IT 304 Systems Design and Analysis   Fall 2022
Southern New Hampshire University
- Form a system design and analysis mindset in ten methodologies.
- Perform reverse engineering of small-scale physical systems to bridge database design learning with transaction generation and analysis of functional engineering.

Tutor	*Data Science and Programming*	2019 – 2020

https://tutormatchingservice.com
- [Tutored](#) data science in both R and Python, including text and data mining, machine learning, statistics, and ggplot2 visualization.

Corporate Trainer	*Data Science and Discrete-event Simulation Curriculum*	2004 – 2014

ProModel Corporation, Orem, UT
Delivered in-person programming and simulation training ~5-7 times yearly, 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 adult and junior riders in field sports and performance care.
- Raised, [trained](#), and sold 14 performance animals.

INSTRUCTIONAL DESIGN AND CURRICULUM DEVELOPMENT

[Author](#)	**ICARUS AI E-Learning**, 100 Wilshire Blvd, Santa Monica, CA	12/22 –

Course: Technical Writing with ChatGPT (new)   03/23 -
Two students used ChatGPT to pass classes but not in their voice.
Designed course that builds ownership of one's authentic AI voice.
- Includes principles, mechanics, and Python with ChatGPT REST-API to deepen one's love of language and self-expression, including
  a) Assess metrics representing discourse originality.
  b) Sharpen information exchange with polysyllabics by ontology.
  c) Apply appropriate epexegesis techniques.
  d) Deepen one's love of language and self-expression.

Course: [> 7.Pillars.of.Python](#)   12/22 – 03/23
Formulated a novel Python course for learners to experience neuroplasticity with data object transformation by coding iterators, conditionals, and functions with class objects to deliver outcomes.
- Targets learners who question if their skills provide dependable, specific activities to transform data for stats and machine learning.
- Builds sophistication in numeric and text data pack and unpack.
- Provides means to decode new libraries and learn objects quickly.

Content Lead Writer	**Google Inc**, Learning Lab, NY, NY (via synergis)	03/22 – 11/22

Course: Google 2023 [Advanced Data Analytics Certificate](#)
- [Performed](#) lead writing and programming for a 6-part Python 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.
- Reviewed and summarized neuroscientific literature.
- Created two course capstone projects requiring cross course machine learning and statistical analysis methods, including simple; multiple; logistic; regression, classification, and 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 assets like prompts and quizzes.
- Passed [coding](#) entrance examination.

INSTRUCTIONAL DESIGN AND CURRICULUM DEVELOPMENT (continued)

Curriculum Developer, Southern New Hampshire University, Manchester, NH   02/22–
Perform contracted instructional design to integrate machine learning methods and deepen students' code knowledge.

IT-226 Communication in STEM Professions (undergraduate)
- Update curriculum with information policy research, ethics theory, sentiment exercises, and NLTK library to experience parts of speech.
- Learners collectively germinate a two to nine syllable tree from weekly readings to learn to thwart AI plagiarism score algorithms.
- Use class reflection corpus for sentiment analysis and LDA.
- Redesigned course materials to account for ChatGPT's paradigm shift.

IT-304 Systems Design and Analysis (undergraduate)
- Performed instructional design by updating learning objectives, building weekly lectures, Python materials, and learning activities.

Content Writer   **EXPO Summer Programs**, Norwood, MA   04/21 – 06/21
Department: Education and Training
- Designed a 1-week AI foundations course with 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 and technical curriculum development for
- **Lockheed Martin,** San Antonio, TX. Wrote a customized simulation course for scheduling engine overhaul for F-22 and F-35 Lightning.
- **NASA,** Kennedy Space Center, Titusville, FL. Designed and delivered discrete-event curriculum for optimizing a paper-to-image system.
- **NASA,** Washington, DC. Developed curriculum for simulating space asset portfolio resource requirements with complex algorithms and ETL.
- **West Point,** West Point, NY. Developed curriculum and performed in-person training for modeling war-based resources and logistics.

PROFESSIONAL EXPERIENCE

Technical Writer and Illustrator II, Alert Innovation, Billerica, MA   11/21 – 03/22
Department: Learning, Training, and Development
- Interviewed operation owners and engineers to draft and update documentation for quality robotics and complex operating structures.
- 12 maintenance manuals, 11 service procedures, and two user manuals.

Scientific Editor   *Data science peer-reviewed publications*   07/20 – 06/21
Accdon, LLC (Publishing Services), Waltham, MA
- Passed exam and completed scientific language editing training.
- Edited three manuscripts for peer-review journal publication.

***Simulation Industrial Engineering* Consultant,** ProModel Corporation, Orem, UT   03/04 – 01/16
Performed 30+ business process reengineering and application development in defense (security clearance), manufacturing, and pharma industries. Leadership of clients and developers included
- Strategic assessments, project management, and wrote specifications.
- Coding with C++ and system design with ERD, EER, DFD, and IDEF0.
- Demand planning, resource/budget forecasting, and program management.

SKILLS

- Cloud: performing Google certification for Machine Learning Engineer.
- Languages proficient: Python,, R, and VBA.
- Languages advanced: C++,, SQL, and Visual Studio.
- Languages familiar: Linux, HTML, Java, SMSS, 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, sentiment.
- Multimedia: (~Sphinx), Photoshop, Illustrator, Help/Manual, LaTeX, and Markdown.
- Research: X9 bibliographic database, literature review and summary.
- Technical writing including circuitry, robotics, SaaS, and methodology.

RESEARCH INTERESTS

I. **Use of polysyllabic for authenticity identification.**

Before the release of ChatGPT, I have been using polysyllabics and logodaedaly to assess new authenticity scoring mechanisms. The intention isn't to discern plagiarism but to create **a)** a discourse score and b) a programmatic means to improve information exchange quality with polysyllabicisms and periphrastics.

- Encourage students to continuously inventory their work for authenticity score substrate, i.e., an individual's unique originality score.
- Inventory diverse polysyllabic words into syllable trees.
- Transpose of syllable tree into ontological categories with LDA et al.
- Form (n x 3) matrix by ontology by word by its polysyllabic complexity index.
- Validate score mechanism and validate methods for accuracy and effectiveness.
- Applied for ChatGPT's API for scholastic purposes test code scoring methods.
- Release a logodaedaly library pypi.org to expand user community.

II. **Artificial intelligences use of polysyllabics for human conversation captivation.**

Like a magician's legerdemain, I posit conversational AI's ability to manipulate human conversation with polysyllabic words.

- A programmatic means is necessary to discern a human's lexicon level.
- Appropriate statistical measures of fairness require development. For example, in a lecture, I described a specific system's "propensity" and, by happenstance, bewildered a student who thankfully asked for clarification.
  - With ChatGPT, is bewilderment about to run amok?
- To investigate: suspects and criminals have a long history of deviance and obfuscation in various forms. Analysis of their methods could help form artificial intelligence countermeasures of such persuasion tactics with "big words."

III. **The use of long-format podcasting for expanding computer science literacy.**

National policy pursuits focus on requiring computer science as a high-school graduate requirement [1]. A complimentary argument exists for including a critical podcast analysis curriculum to facilitate computer science literacy. Consider

- In the 1960s and 1970s, the space race fueled content for learners.
- At present, multimedia learning modalities are expanding exponentially. Machine learning experts like Lex Fridman (https://lexfridman.com/) provide deep and wide content to broaden young learners' knowledge framework.
- Every week, it churns fresh, baked, and well-researched content from industry juggernauts who also provide pulse, pace, interest, and taste.

RESEARCH EXPERIENCE

Research Volunteer   *23-bed, 63-nurse and associate acute care floor*   06/21 – 01/22
Winchester Hospital, Winchester, MA
Manager: Debra Barbuto, RN, MSN, debra.j.barbuto@lahey.org

A. Investigated the efficacy of evidence-based purposeful hourly rounding on patient falls and length of stay satisfaction, including
   o Designed the data collection and encoded three months of daily patient measurements.
   o Performed REDCap API data transfer training in R software with CRAN data.table package.
   o Outcomes: associate chief nursing officer presented methods, viability, and benefits of adopting purposeful hourly rounding.

B. Assisted in evaluating call bell signal standardization across units to help distinguish noncritical from critical care requests.
   • Located call bell parts. Wasn't able to perform system upgrade.

UNIVERSITY SERVICE

Mentor   **Undergraduate Research Day 2023**   04/23
Southern New Hampshire University, Manchester, NH

A. *ChatGPT's Discourse on the Method* (posterboard)
   Assess measurement of polysyllabic information exchange quality.
   • Admittance entitles students to apply for a scholarship.

B. **Amazon Web Services Coding Jam Competition**   10/22
   Provided three students with custom training for a four school, ~50 students, AWS hackathon. Team successfully finished challenge.

e-Equipment Donor   **Partner with Winchester, MA e-trash recycling**   07/22 -
Provide students with monitors(11), cables(many), and miscellaneous items like graphic boards(3).

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 pypi.org libraries.
   • Scripting for the data science pipeline (REST APIs, regex, mongoDB).
   • Introduction to natural language processing.
   • Introduction to database administration concepts and management.

Statistics
   • **Bayesian** - suitable to instruct using existing university materials but require time and or assistance to construct a course.
      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.
         • Inference, ANOVA, association, mR, 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.

PROFESSIONAL DEVELOPMENT

Google Cloud, Machine Learning engineer certification   11/22 –
- Fifteen courses for professional certification.
- https://www.cloudskillsboost.google/paths/17. Account ID: b.hogan@snhu.edu.

Google Learning Lab, Multimedia asset design training   03/22 – 07/22
- Performed E-Learning multimedia training, including segmentation, personalization, cognitive load balancing, Flesch Kincaid measuring, contiguity, and signaling.
- Trained on 18 multimedia E-learning designs like readings, vignettes, and quizzes.

Amazon Web Services, Account ID: FpfKzlcOwkmK4YPzjMp3JA2   2020
- Performed training on the platform's stack across 14 academy classes, seven live twitch videos, and books by experts J. Simon, and C. Fregly, A. Barth.
- Invited for a third data engineering position interview but not selected.

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   2000
- Cognitive Style of PowerPoint

Hammer and Company: Reengineering Process Mastery, www.hammerandco.com   1997 – 1999

ADVISING

Career Advisor   **FIRSTHAND Advisors,** https://harvardocs.firsthand.co/   2021 -
                        Office of Career Services, Harvard University
- Perform 2-4 free reviews of student resumes, CVs, and portfolios.

Graduate Advisor   *Nursing, programming fundamentals, and research topics*   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	Position
• TeddyM	Alert	IT	Portfolio, personal	02/22 – 09/22	IT Analyst II
• SelenaW	Winchester Hospital	Inpatient Services	TEAS exam tutoring	10/22 – 11/22	Certified Nurse
• HarrisonH			GED tutoring	03/20 – 07/20	

AWARDS AND HONORS

A. **foobar participant**, Google, Inc   Spring 2022
- Deep Python and Linux research yielded an invitation to this elusive challenge.
- Completed three challenges before timed out.

B. **Lex Fridman interview finalist for personal secretary position.**   10/20 – 01/21
- Lex was exceedingly tough and I'm grateful for his personal consideration.

C. **Golden Key International Honour Society**, Member   10/20 -

VOLUNTEER

Mr. Fix-it, First Congregational Church, Winchester, MA, karenbellacosa@me.com   03/23
        Perform at annual repair café fixing on demand repairs of lights, bits and bobs.

Study Participant, ClinicalTrials.gov Identifier: NCT05058950   10/22 -
        An Observational Study Using Multimodal Sensors to Measure Cognitive Health in Adults
        and Distinguish Mild Cognitive Impairment from Normal Aging, a.k.a. Intuition study.
- Fascinated by the agency of biometrics and biomimetics iWatch multimodal sensors.

Wikipedia Language Editor, Account ID: bhogansnhu.edu   08/22 -
- Perform periodic article editing and updating with research citations.

Trash to Treasure, Winchester High School Art Department, MA   11/20 – 09/21
- 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 crowdsource methodologies.
- Performed 1017 human intelligence tasks (HITs) and human subject activities.
- 99.03% approval rating on classify, extraction validation, bot language training.

REFERENCES

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        Southern New Hampshire University
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        Grow with Google Career Certificates
        Advisory Board at University of Houston
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        Thank you for considering Professors Kahn's prior reference material below.

I remain deeply grateful to each of the following people for their generosity and time spent recommending me for teaching and writing positions.
- Professor Humayun Kahn, 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

[1] 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: https://eric.ed.gov/?id=EJ1254594.