Brian Hogan, M.S.
Instructor of Computer Science
School of Science and Technology
ABET PEV, Endicott College
376 Hale Street, Beverly, MA, 01915
<IN><instructor.github><portfolio.github>

EDUCATION

Syracuse University, Syracuse, NY — Sept 2018 - Dec 2020
M.S. Applied Data Science, 3.8/4.0

Boston College, Chestnut Hill, MA — Sept 2000 – May 2001
M.S. Sociology, Statistics. Matriculated; completed 5 courses; work relocation

Harvard University, Cambridge, MA — Sept 1997 - June 1999
C.S.S. Bus Admin. Required on campus person prior to Extension School accreditation

Babson College, Wellesley, MA — Sept 1989 – May 1993
B.S. Business Administration and a Psychology Departmental Degree at Wellesley College

INSTRUCTION

Instructor — **School of Science and Technology, Endicott,** in-person — Spring 2024 –

CSC160 - Introduction to Programming
- Havill, J. (2020). Discovering Computer Science, 2nd

CSC160L- Introduction to Programming Laboratory with C++, Python, AI\ML
CSC265 – Discrete Mathematics including logic, graph theory, sets, RSA

- Built an AI chatbot for discrete mathematics active learning

Instructor — **School of Professional Studies, Clark University,** on-ground — Fall 2023 -

MSCS-3050 Software Life Cycle
- Design concepts, paradigms, quality, testing, and configurations

MSCS-3070 Survey of Systems and Programming Language
- Bits, von Neumann, LC-3, Assembly, data structures, IO, C, and C++

Instructor — **Department of Computer Science,** undergraduate, in-person — Feb 2022 -
Southern New Hampshire University, Manchester, NH

IT-304 Systems Design and Analysis — Fall 2022, Fall 2023
- Instruct ontology information science and 10 system design methods
- Integrate Generative AI: Enhance student problem-solving autonomy with AI assistants for synthesizing requirements and complex data object models, resulting in a 40% increase in design projects.
- Pioneered system design with Generative AI ASCII visualizations, which quickly transform data object designs into visual interactive discussions of data structure and coding solutions.

IT-226 Communication in STEM Professions — Spring 2023
- Enhance precise skills for effective interpersonal relations
- Utilize an interactive corpora and NLP for information exchange
- Implement GPT AI to augment generation and information synthesis

Instructor **Department of Computer Science** Summer I 2023
Benjamin Franklin Cummings Institute of Technology, Boston, MA
- **CT-144** Intermediate C++, Summer tutor contract for C++ instruction

Teacher **ICARUS AI E-Learning**, 100 Wilshire Blvd, Santa Monica, CA Fall 2022
- Built specialized how.To data transformation: 7.pillars.of.python

Tutor Data Science and Programming, https://tutormatchingservice.com 2019 – 2020
- Tutored data science analysis and machine learning in R and Python

Corporate Trainer **Industrial Engineering with Discrete-event Simulation** 2004 – 2016
ProModel Corporation, Orem, UT
Performed instructional design, technical curriculum and training like
- **Lockheed Martin**, San Antonio, TX. F-22 and F-35 engine overhaul
- **NASA**, Kennedy Space Center, FL, optimizing paper-to-image system
- **NASA**, Washington, DC, space asset portfolio ETL, cost, and scenarios
- **West Point**, NY. War-based resources and logistic readiness planning

Riding Instructor Taught horsemanship and performance care. Gone Away Farm 2002 – 2012

CURRICULUM, CONTENT WRITING, & INSTRUCTIONAL DESIGN

Curriculum Specialist **Quanthub** Learning Lab, Birmingham, AL 10/23 – 12/23
State of Alabama 2023 skilling initiative: www.innovatealabama.org
- Edited and updated curriculum for instructional designers
  - AI Ethics, Prompt Engineering, and Workforce Impact
  - Innovate.alabama.Outcome.updated.python.curriculum
- Developed a curricula assessment engine and algorithm ensuring AI/ML training topic relevance, depth, sophistication, and coding schemas.
- Integrated scientific research articles, textbooks, and web scrapings and specified per line-item discrepancies, wording, and corrections.

Writer **Noodle, New York, NY, Elissa Lappendga, contract** Mar - Aug 2023
graduate course: COSC-526, Introduction to Data Mining @ www.utk.edu
- Drafted a 10-module graduate curriculum in data mining with advanced algorithms and practitioner skills for: A.Spark, recommenders, MLflow

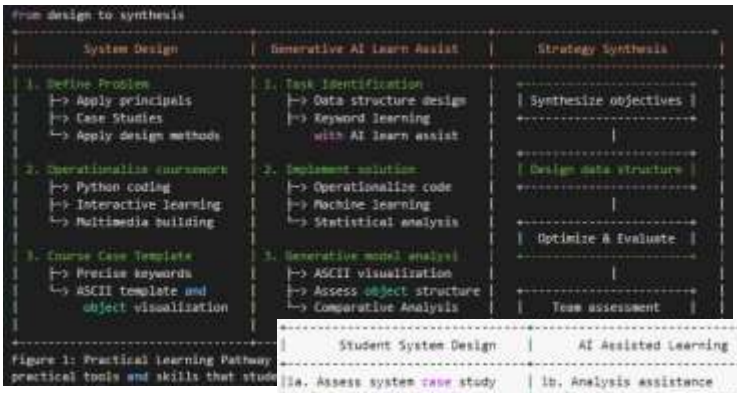
Content Writer **Google Inc**, Learning Lab via synergis, NY, NY 03/22 – 11/22
Coursera course: Google 2023 Advanced Data Analytics Certificate
- Lead writer for course 2 of 7, Get Started with Python
- Produced 21 instructional readings and 10 codebooks with >3000 lines
- Wrote two capstones w OLS, LR, MLR, logistic, chiSq, supervised, SVM
- Reviewed and edited scripts for construct correctness and continuity
- Trained in 18 E-Learning multimedia assets like prompts and quizzes
- Passed coding entrance exam and admitted to foobar.withgoogle.com

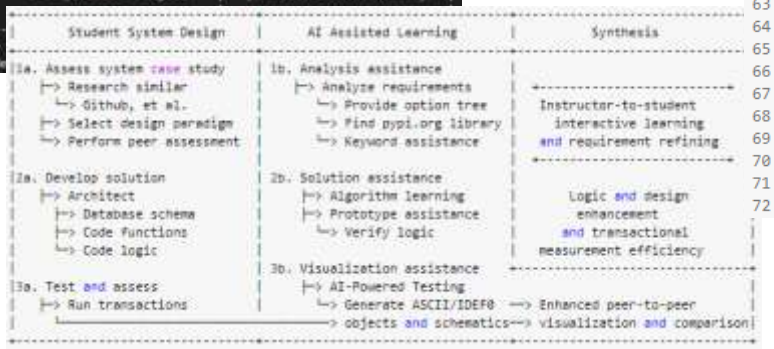
Technical Writer **Alert Innovation,** Billerica, MA 11/21 – 03/22
Department: Learning, Training, and Development
Drafted complex robotic media for repair, service, for training
- 12 maintenance manuals, 11 service procedures, and 2 user manuals

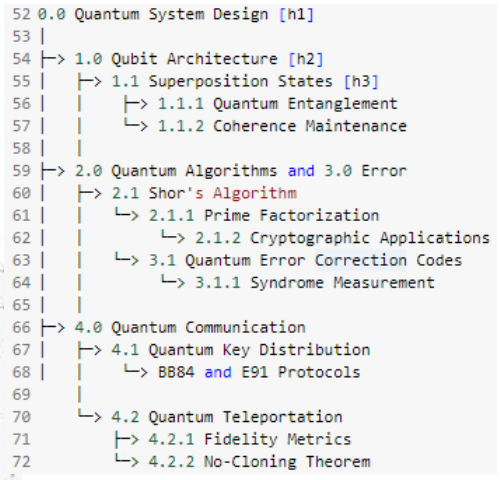
Scientific Editor Accdon, LLC Publishing Services, Waltham, MA 07/20 – 06/21
- Trained with scientific style guide and edited 3 journal manuscripts

Instructional Design Southern New Hampshire University, Manchester, NH Fall 2023

Specialize in dynamic generative AI and ASCII templates, including meta-design assessment and synthesis (left image), expertise with dynamic instructor-to-student design iterations, advanced compute methodologies such iCloud Console and advanced compute paradigm skilling (right image)







IT-226 Communication in STEM Professions, uncontracted Spring 2023

- Updated course with advanced persuasion writing skill methods
- Implemented polysyllabic learning for authentic voice principals

IT-304 Systems Design and Analysis, contracted Fall 2022

- Performed for Python code, media, and lecture instructional design
- Updated reengineering methodologies and interactive learning bytes

Content Writer **EXPO High School Summer Programs**, Norwood, MA 04/21 -> 06/21

- Wrote AI/ML curriculum for instructor training: 50 pages, 10821 words

Instructional Design **ProModel Corporation, Consulting**, Orem, UT 2004 -> 2014

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. optimized paper-to-image
- **NASA**, Washington, DC. Performed tools and curriculum for simulating space asset portfolio program mgmt with complex algorithms and ETL
- **West Point**, NY. Built curriculum for war-based logistics

SKILLS

Proficient	Advanced	Familiar	IDEs
Python, R	APIs, C++, SQL, VBA	Linux, SMSS	Colab, Spyder, VS

- Research includes fact sheets, literature review, X9 bibliographic database
- Technical writing includes circuitry, robotics, and scientific instruments
- Distillation of complex scientific processes into plain language, like GeMM breeding

SKILLING AND INSTRUCTION INTERESTS

Generative AI AI Prompt engineering, text synthesis, dynamic ASCII representations

Statistics

A. **Bayesian** - suitable to instruct with existing university materials
   a. Classwork: Stanton, J. (2017). Reasoning with Data with R
   b. Personal: Marin, J-M et al. (2014). Bayesian Essentials with R
      - Inference, ANOVA, association, mR, categorical, series.

B. **Frequentist** - theory, classification, CNN, decision tree, linear, log, multiple regression, PCA, SVM, and unsupervised.

C. James, G., Witten, D., Hastie, T., Tibshirani, R. (2021). *An introduction to statistical learning*.

PROFESSIONAL EXPERIENCE

Consultant

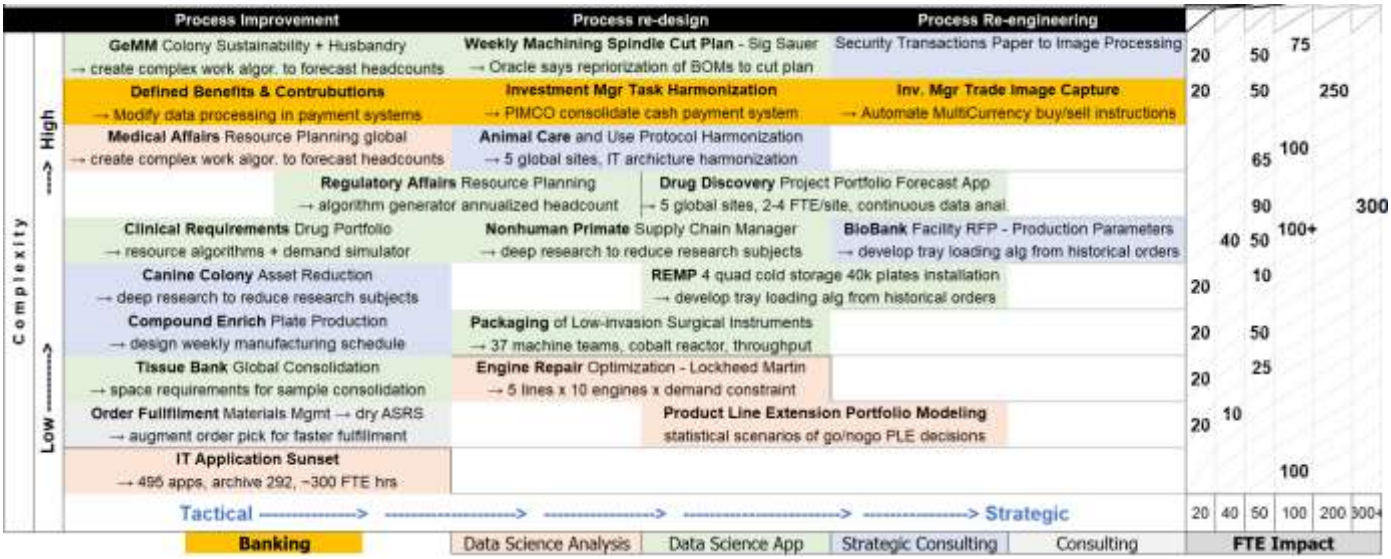
Industrial Engineering Simulation, ProModel Corp, Orem, UT 2004 - 2016

Reengineered systems and implemented applications in pharmaceutical, manufacturing, and defense with security clearance, including

- Led client interactions and managed software development teams
- Delivered strategic assessments, specifications, and implementations
- Demand/constraint, resource/budget forecast, and program management
- Coded with C++ and system design tools like ER, EER, DFD, and IDEF0

Applied predictive and descriptive statistics to

- Nonhuman primate and GeMM breeding for loss, readiness and husbandry
- BIG pharma portfolio attrition, go/no-go, and resource requirements



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
   - Designed data collection, encoded, and REDCap API transfer in **R**
   - Outcomes: adopted purposeful hourly rounding

B. Assisted in evaluating call bell signal standardization across units to distinguish noncritical from critical care requests; located parts

RESEARCH INTERESTS:: 0.0 Dynamic Topic Summarization and Learning Enhancement [h2]

▼ **>_1.0 Schematic methodology**

1.1 **Topic grok**

├> Tailored ontological formations with AI techniques for deep knowledge acquisition

├> Combine ASCII with IDEF technology to form mnemonic trees renderable anywhere

└> AI leverages templates to understand and summarize complex topics

└> AI melds analysis structures with machine learning and NLP into learning media

▼ **>_2.0 ASCII + IDEF0 mnemonics**

2.1 Informational schematics

├> Mnemonic structures enhance learning and recall

└> Based in adaptive knowledge and stem theory for dynamic learning

└> Matricize knowledge by dimensions with mnemonics, symbols, and keywords

└> Utilize Noam Chomsky's kernel sentence theory for precise information exchange

▼ **>_3.0 Library construction and AI chatbots**

3.1 pypi.org library construction

├> Create tools for educators and learners to access structured interactive guides

└> Synthesize lecture audio, PDFs, and textbooks into structured educational content

└> Convert substrate with JSON for interactive AI Chatbot reinforcement

A: Topic Grok	B: ASCII-IDEF0 Mnemonic Learning Tree
Polysyllabics for Authentic Information Exchange –> Use of polysyllabics for information authenticity and exchange quality. –> Upskilling with logodaedaly via polysyllabicisms and periphrastics may combat inauthentic writing. Steer learners toward authenticity and heighten information exchange quality; new positive discourse scoring mechanisms can encourage the personal inventory of one's ongoing substrate pool. Other items include • List diverse polysyllabic words into syllable trees. • Transposition of syllable trees into ontology categories using LDA et al. • Form (n x 3) matrix by custom ontological by polysyllabic complexity index. • Validate score mechanisms and methods for accuracy and effectiveness. **Current work -** a) Building objects pypi.org library b) Using OpenAI and DeepLearn.AI APIs with prompting and fact sheets. **2.0 AI Agents for Enhanced Learning** Focuses on enhancing educational methodologies using AI course agents. They create more interactive and personalized learning environment including • Lecture Content Transformation: ○ AI agents convert lecture audio to text, building a class corpus for ai assistants • Synthesis and Interaction: ○ Agents synthesize information from educational resources and provide interactive experiences. ○ Generate summaries and highlight critical concepts, facilitating a cohesive understanding and engagement with the course material.	▼ >_0.0 Polysyllabics for authentic information xchange –> 1.0 Enhancing Language Authenticity ├> Schematic ├> Use polysyllabics and periphrastics in AI skilling ├> Goal:: logodaedaly library on pypi.org with APIs └> perform syllabic assembly with topic relevance –> 1.1 Methodology and tools ├> Design ├> List polysyllabic words by # of syllable trees ├> Transpose syllable trees -> ontological structures └> Create:: (n x 3) by ontological and polysyllabic –> 1.2 Entropic scoring mechanisms and refinement ├> Application and recursive learning ├> Evaluate for effectiveness and discourse scoring ├> Refinement with entropic scoring └> how.TO:: increase clarity with noise scores ▼ –> 2.0 AI Course Agents for Enhanced Learning ├> What ├> Convert lecture audio for class corpus text ├> Synthesize lecture notes and textbooks w GPT APIs └> Emailing lecture summaries and disparity indexes –> 2.1 Interactive Learning Enhancement ├> AI Assistant agent └> Feed media to AI for interactive student learning

LEARNING

i. Rabbinical Ordination under Rabbi Nachman Wilhelm 2023 – expected 2026
Online Smicha, Institute for Rabbinical Studies, Suffren, NY

ii. Stanford Online: Statistical Learning Certificate Fall 2023 –
An Introduction to Statistical Learning by James, Witten, Hastie, Tibshirani, 2021

iii. **Generative AI Training at DeepLearning.AI and Open.AI** Spring 2023 - Ongoing
- Practical use case: Testing GPT 3.5 prompting for course grading and outcome

iv. **Google Learning Lab, Multimedia asset design training** Spring 2022
- Performed E-Learning multimedia training on 18 assets including readings, vignettes, segmentation, cognitive balancing, Flesch Kincaid, and signaling.

v. **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.

vi. **Data Science Specialization Certificate,** Johns Hopkins via Coursera 2017
- https://www.coursera.org/specializations/jhu-data-science

vii. **Re-engineering & Statistical Visualization Specialization Training**
- Edward Tufte: Analyzing and Presenting Data and Information 2000
- Hammer and Company Reengineering Process Mastery 1999

UNIVERSITY SERVICE & VOLUNTEER

Career Advisor **Harvard University,** Mignone Center for Career Success 2021 –
a) Perform 2 to 5 resume reviews annually/recommendations. Idylla Louis

e-Donor c) Student e-Equipment Donor, e-Trash Recycling, Winchester, MA 07/22 -
- This semester: 6 monitors, 1 gaming PC, and dozen cables
- Past: 19 monitors, 3 hard drives, 3 chips, and 1 graphic board

Club Advisor b) SNHU IT Student Association, interim advisor 10/23 – 12/23

AWS Mentor d) Amazon Web Services Coding Jams with RedRiver Labs 10/22, 04/23
- Entered 11 and 3 students in cross university competition

Mr. Fixit e) First Congregational Church Repair Cafe, Winchester, MA, 03,06,09/2023
- Repair lamps, fans, and e-gadgets for the open public

Trash to Treasure f) **Winchester high school Art Department & Jackson Lumber, Woburn** 2021
- Gathered cutoffs, paint, and supersize cardboard for Jenn Levatino

Coaching	What	Focus	Date
• SelenaW	Nurse.Asst	Nursing school skilling	11/23 – 01/24
• Lauren	Woburn,MA	GED literacy upskilling	09/23 – 11/23
• Andrew, Pietro	SNHU students	ADHD skilling development	06/23 – 08/23, 02/23 –03/23

AWARDS AND HONORS

foobar participant Google, Inc, Deep Linux research yielded an invitation to challenge.
∞ Completed three before timed out

Lex Fridman Finalist for role as Lex's personal secretary 10/20 – 01/21
∞ Lex reimaged toughness. Grateful for his consideration.

Golden Key International Honour Society, Member 2020 -

REFERENCES

Jessica Kaufman, PhD
Professor of Biotechnology & Bioengineering
Interim Associate Dean of Science and Technology
Endicott College
ABET PEV, Room 236F, Judge Science Center
desk.digits: 978-232-5118
email: jkaufman@endicott.edu

Dr. Kim Bo, Ph.D.
Computer Science Department Chair, Professor
School of Engineering, Technology, and Aeronautics, Southern New Hampshire University
2500 North River Road, Manchester, NH 03106
phone: 603-626-9458
email: b.kim@snhu.edu

Professor Arana Fireheart
Assistant Professor of Information Technology
School of Engineering, Technology, and Aeronautics, Southern New Hampshire University
2500 North River Road, Manchester, NH 03106
phone: 603-626-9458
email: a.fireheart@snhu.edu

Dr. David Hoffman, Ph.D.
Children and adolescent psychologist
David Hoffman, PhD, LLC
1 Mount Vernon Street
Winchester, MA 01890
phone: 781-437-7370
email: dh@dhphd.com

Professor Humayun Kahn, MS, MBA
Adjunct Faculty, Syracuse University
https://www.linkedin.com/in/hhkhan/
phone: 603-890-9870, email: hhkahn@syr.edu

Jim McCoy
Instructional Designer at Google, Learning Lab
Grow with Google Career Certificates
Advisory Board at University of Houston
phone: 832-661-7145; https://www.linkedin.com/in/ideascomealive/
jimmcoy@google.com; ideascomealive@gmail.com

Robert K. Stephens
Polaroid Inventor and Multiple Patent Holder
3 Ginn Road
Winchester, MA
781-570-9489, email: bob.stephens43@yahoo.com

I'm grateful for each person's generosity and support of my past recommendations.

- David Primrose, MS, Oracle and Prof John Santerre, PhD: congrats working with Andrew Ng

With all forms of wisdom did she build her house; she carved out its seven pillars. She prepared her meat, mixed her wine, and also set her table. She has sent out her maidens, she announces upon the wings of the city heights: "Whoever is a simpleton, let him turn here!" As for the one who lacks heart, she says to him: "Come, partake of my food and drink of the wine that I have mixed. Leave, O simpletons, and live, and stride in the way of understanding." ~Proverbs 9:1-6