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<in><github><portfolio>

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 and statistics. Matriculated and completed 5 courses; 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

CURRICULUM AND CONTENT CREATION

Author   **Noodle, New York, NY, 10011, Elissa Lappendga, contract**   Mar - Aug 2023
graduate course: COSC526, Introduction to Data Mining @ www.utk.edu

Drafted a 10-module course in data mining with advanced algorithms and practitioner skilling for operating Apache Spark, recommender systems, and MLflow scaling in a Colab environment.

Content Writer   **Google Inc**, Learning Lab, NY, NY (via synergis)   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.
- Developed two capstone projects integrating OLS, LR, MLR, logistic, chi-sq, supervised learning, and SVM.
- Reviewed and edited scripts for verbiage, constructs, and continuity.
- Trained in 18 E-Learning multimedia assets like prompts and quizzes.
- Passed entrance coding exam and access to foobar.withgoogle.com

Curriculum Developer, Southern New Hampshire University, Manchester, NH   02/22 –
     A. *course: IT-226 Communication in STEM Professions*
      Update course with advanced persuasion writing skill methods and
- Instill polysyllabic learning by germinating 2-9 syllable word trees from diverse content to form voice pillars and authenticity.
- Construction of class corpus for interactive learning.
- Provide writing assistance learning technology, like entropy.

     Performed contracted instructional design for
     B. *course: IT-304 Systems Design and Analysis*
- Update learning objectives, weekly lectures, re-engineering methodologies, Python materials, and interactive learning moments.

Author   **ICARUS AI E-Learning**, 100 Wilshire Blvd, Santa Monica, CA   12/22
- *course: >_7.Pillars.of.Python*
Data wiggly block tran.

Content Writer   **EXPO Summer Programs**, Norwood, MA   04/21 – 06/21
- Designed a high school AI intensive course w 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 for 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
Drafted advanced robotic media for training, service, strip-down repair, and diagnostics, including
- 12 maintenance manuals
- 11 service procedures and 2 user manuals.

Scientific Editor   *Data science peer-reviewed publications*   07/20 – 06/21
Accdon, LLC (Publishing Services), Waltham, MA
- Trained with scientific style guide and edited 3 journal manuscripts.

Industrial Engineering Simulation Management Consultant, ProModel Corp, Orem, UT 2004 - 2016
Performed 30+ reengineering and application implementations in pharma, manufacturing, and defense with security clearance, including
- Leadership of clients and software development staff.
- Strategic assessments, design, specifications, and implementation.
- Demand planning, resource/budget forecasting, and program management.
- Coded with C++ and system design tools like ERD, EER, DFD, and IDEF0.
- Simulation curriculum creation and delivery for NASA and WestPoint.

SKILLS

Proficient	Advanced	Familiar	IDEs
Python, R	C++, Java, SQL, VBA	Linux, SMSS	Spyder, Visual Studio

- Representational State Transfer (REST) APIs with Facebook, REDCap, and Twitter.
- Libraries: caret, e1071, ggplot2, klar, pandas, sci-kit-learn, and Tensorflow2.
- Multimedia: (~Sphinx), Photoshop, Illustrator, Help/Manual, LaTeX, and Markdown.
- Research: fact sheets, X9 bibliographic database, literature review and summary.
- Technical writing including circuitry, robotics, SaaS, and methodology.

INSTRUCTOR EXPERIENCE

Instructor	**School of Professional Studies, Computer Science,** graduate **Clark University,** Worcester, MA

MSCS-3050 *Software Life Cycle, on-ground*   Fall 2023
- Design concepts, paradigms, quality, testing, configurations.

MSCS-3070 *Survey of Systems and Programming Language*   ibid.
- Bits, von Neumann, LC-3, Assembly, data structures, IO, C, 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 & 2023
- Instruct using ten system design and reengineering ontologies.
- Emphasize their practical applications in Python architecture.
- Contracted for instructional design of lectures and multimedia.

IT-226 Communication in STEM Professions,   Spring 2023
- Instill approaches to achieve specific and precise conclusions in interpersonal relations in STEM professions.
- Use interactive code, data, and text corpus for information extraction, template generation, and GPT augmentation.

Instructor	**Department of Computer Science** **Benjamin Franklin Cummings Institute of Technology**, Boston, MA, 02116

CT-144 Intermediate C++   Summer I 2023
- Summer tutor contract for C++ programming instruction.

Tutor	*Data Science and Programming,* https://tutormatchingservice.com 2019 – 2020 • Tutored data science in R and Python.

Corporate Trainer	**Industrial Engineering Simulation with Discrete-event** 2004 – 2016 ProModel Corporation, Orem, UT Performed 5-7 per year on-ground custom solution simulation training, instructional design, and technical curriculum development for

- **Lockheed Martin,** San Antonio, TX. Engine overall for F-22 and F-35.
- **NASA,** Kennedy Space Center, FL. Optimizing paper-to-image system.
- **NASA,** Washington, DC. Space asset portfolio resource requirements, cost and personnel, data ETL, and scenario of sliding time scales.
- **West Point,** West Point, NY. War-based resources and logistics.

ADVISING

Career Advisor	**FIRSTHAND Advisors,** https://harvardocs.firsthand.co/ 2021 - 2023 Office of Career Services, Harvard University • Perform 2-4 free annual reviews of student resumes and portfolio.

Graduate Advisor	***Nursing, programming fundamentals, and research topics*** 2017 – 2018 *Self-employed, Greater Boston Area* Advised nursing students logic and methods in

- Topic research, survey design, and statistics.
- Writing abstracts, fact sheets, and healthcare policy assessments.

INSTRUCTIONAL READINESS

Generative AI, Machine Learning, Programming, and Systems

- AI Prompt engineering, text synthesis, and fact sheet construction.
- Intro to advanced Python and R.
- Systems analysis design, re-engineering, and theoretical paradigms.
- Text and image mining with algorithm theory and pypi.org libraries.
- Scripting for the data science pipeline (REST APIs, regex, mongoDB).
- Introduction to advanced NLP like lexical semantics, POS, negation.
- Introduction to database administration concepts and management.

Statistics

A. **Bayesian** - suitable to instruct using existing university materials but require time and or assistance to construct a course.
   a. Classwork: Stanton, J. (2017). Reasoning with Data – An Introduction to Traditional and Bayesian Statistics using R.
   b. Personal: Marin, J-M et al. (2014). Bayesian Essentials with R.
      i. Inference, ANOVA, association, mR, categorical, series.
B. **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.

UNIVERSITY SERVICE

Mentor **Southern New Hampshire University,** Manchester, NH

A. *e-Equipment Donor   e-Trash Recycling, Winchester, MA   07/22 -*
   - *Partner with municipality to provide students with monitors (11), cables(+10), and miscellaneous items like graphic boards (3).*
B. Amazon Web Services Coding Jam Competition   10/22 & 04/23
   - 04/23 entered eleven students and 10/22 entered 3 students.

Name	Institution	Department	Mentoring Focus	Date	Position
• Andrew	SNHU	Comp. Sci.	Skill Development	06/23 – 08/23	junior
• PietroL	SNHU	Comp. Sci.	Study coaching	02/23 – 03/23	sophomore
• SelenaW	Winchester	Inpatient	TEAS exam tutoring	10/22 – 11/22	Certified Nurse

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 and encoded 3 months of patient metrics.
   - Performed REDCap API data transfer in R software with CRAN data.table
   - Outcomes: adopted 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; IT unable to perform system upgrade.

I. Use of polysyllabic for informing authenticity and information exchange quality.

Assessing polysyllabics and logodaedaly could support the testing and development of new authenticity scoring mechanisms. The intention isn't to discern plagiarism but create **i)** a discourse score and **ii)** a programmatic means to improve information exchange quality by adding polysyllabicisms and periphrastics.

- Encourage students to inventory their work for authenticity scoring substrate.
- Inventory diverse polysyllabic words into syllable trees.
- Transposition of syllable trees ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮ using LDA et al.
- Form ▮▮▮▮▮ matrix ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮ complexity index.
- Validate score mechanism and validate methods for accuracy and effectiveness.
- Release a ▮▮▮▮▮▮▮ library on pypi.org to expand the user community.
- Actively working in OpenAI's REST API to implement test model environments.

II. Artificial intelligence's use of polysyllabics for human conversation captivation.

On the horizon is configuring conversational AI to manipulate AI to human conversation. Like a magician's legerdemain, AI's use of polysyllabics and complex jargon could obfuscate outcomes. This work will assess

- A programmatic means and scoring of a human's lexicon level.
- Develop appropriate statistical measures of fairness.

III. The use of long-format podcasting for harvesting computer science literacy content.

Goal: *Create a data pipeline based on quality podcasts with audio transcription automation summarization with ChatGPT into weekly lecture content for discussion and subsequent persuasive argument debating.*

Background: national policy focused on requiring computer science as a high-school graduate requirement[1]. A complimentary argument is university curriculum of dynamic podcast ingestion to build student literacy, consider

- In the 1960s and 1970s, the space race fueled learner content and intrigue.
- 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 and look-ahead capabilities.
- **Outcome:** a harvested compendium of fresh content churned into knowledge.

PROFESSIONAL DEVELOPMENT

   i.   **Generative AI Training at DeepLearning.AI and Open.AI**   Spring 2023

          course: ChatGPT prompt engineering for developers by Isa Fulford and Andrew Ng

- Performing intensive prompt training
- Practical use case: Testing GPT 3.5 prompting for [course grading](#) and outcome.

 ii.   **Google Learning Lab, Multimedia asset design training**   Spring 2022

- Performed E-Learning multimedia training on 18 assets like readings, vignettes, segmentation, cognitive balancing, Flesch Kincaid, contiguity, and signaling.

iii.   **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](#).

 iv.   **Data Science Specialization Certificate,** Johns Hopkins via Coursera   2017

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

  v.   **Re-engineering & Statistical Visualization Specialization Training**

- Edward Tufte: Analyzing and Presenting Data and Information   2000
- Hammer and Company [Reengineering Process Mastery](#)   1997 – 1999

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 timing out.

   B. [Lex Fridman](#) **interview finalist, personal secretary**   10/20 – 01/21
- Lex redefined tough. Grateful for his personal attention.

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

VOLUNTEER

A. **Fix-it, First Congregational Church,** Winchester, MA, karenbellacosa@me.com 03/23,06/23
- Perform repairs of lights, bits, and bobs at the annual church bazaar café.

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

C. **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.

D. **Mechanical Turking, amazonmturk, ID = A3IWDP1WNMWVR8**   2020 – 2021
- Learned crowdsourcing; 1017 human intelligence tasks; classification; extraction.

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

REFERENCES

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        <Thank you for considering his prior reference material below.>

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