Ryan Emberling
Educational Developer

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https://github.com/itsalaidbacklife

Work Experience

Freudigman & Billings   *Westport, CT*

Educational Therapist   Aug 2017 - Aug 2018 and Aug 2013 - Aug 2015

- Tutored 25 students per week in hour-long, 1-on-1 sessions in math, physics, chemistry, computer science, and test-prep
- Profiled students' learning with diagnostic questioning and varied instruction to tailor teaching to each student's needs
- Developed personalized learning regimens to help students mitigate cognitive deficits in memory and depth of processing
- Designed and ran week-long introductory python course
- Aggregated and analyzed standardized test data from over 200 Excel files using VBA script to crawl server's directory structure

Leader Biomedical   *Amsterdam, NL*

Business Relations Officer   *Sep 2015 – July 2017*

- Managed a 10-person team to develop a Class III medical device from initial specification through verification testing
- Developed operational workflows and Quality Management System (QMS) documentation for over 10 interdepartmental processes, resulting in company's ISO 13485 certification
- Trained employees in over 10 workshops on QMS processes
- Automated generation, tracking, and analysis of over 1200 QMS records with multi-file Excel system using VBA

Education

Carnegie Mellon University

Pittsburgh, PA   August 2019

Masters in Educational Technology and Applied Learning Science

Merit Scholarship – GPA 4.1/4.33

Trinity College

Hartford, CT   May 2013

BS in Mathematics and Philosophy

Presidential fellow for Philosophy

Summa Cum Laude – GPA 3.9/4.33

Skills

Learning Science

Backwards Curricular Design
Cognitive Task Analysis
Learning Curve Analysis

Data Science

Python, NumPy, pandas, sklearn, Jupyter Notebooks, Excel with VBA

Web Development

HTML, CSS, Javascript, Node.js, Sails.js, Angular, AngularJS, jQuery

Academic Projects

Cuttle Bot (Partner Project: JS, Angular, Python, sklearn)   *CMU Fall 2018 (Ongoing)*

Developing Python backend and co-creating Angular UI in JS for Educational AI that implements machine learning, move-reversibility, and just-in-time mixed-initiative feedback to teach complex card game with world's first Cuttle-playing AI

E-Learning Module for Plastic Surgeons (Partner Project: OLI)   *CMU Fall 2018 (Ongoing)*

Creating instructional content, co-designing efficacy study, and analyzing study results for hour-long educational module used by the American Society of Plastic Surgeons to teach core concepts of microsurgery to 150 plastic surgery residents

Dimensional Analysis Tutor (Individual Project: Cognitive Tutor Authoring Tools)   *CMU Fall 2018*

Developed Intelligent Tutoring System that adaptively reformats UI to break steps into sub-steps when students struggle

Fraction Comparison Tutor (Individual Project: Cognitive Tutor Authoring Tools)   *CMU Fall 2018*

Co-designed assessments and UI, then lead development of Cognitive Tutoring System that maintains a long-term model of students' knowledge to adaptively interleave decision-making practice with worked examples and self-explanation

Course Design: Intro to Python (Individual Project: Processing.py)   *CMU Fall 2018*

Designed rigorously aligned course using novel approach to assessment of project-based learning