

Ryan Emberling

Educational Developer

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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
- Remediated students' memory systems and depth of processing with personalized learning regimens of exposition and practice
- Designed and ran week-long introductory python course
- Aggregated and analyzed 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 10-person product development team for implantable membrane 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 and tracking, and analysis of over 100 QMS records with multi-file Excel system using VBA

Academic Projects

Dimensional Analysis Tutor (Individual Project: CTAT) *CMU Fall 2018*
Developed Intelligent Tutoring System that adaptively reformats UI to break steps into sub-steps for struggling students

Fraction Comparison Tutor (Partner Project: CTAT) *CMU Fall 2018*
Performed CTA, co-designed assessments, and implemented Cognitive Tutoring System in CTAT that maintains a long-term model of students' knowledge to interleave decision-making practice with worked examples and self-explanation

E-Learning Module for Plastic Surgeons (Partner Project: OLI) *CMU Fall 2018*
Created instructional content, co-designed efficacy study, and analyzed study results for hour-long educational module used at University of Pittsburgh Medical Center to teach core concepts of vascular surgery to 20 plastic surgery residents

Cuttle Bot (Partner Project: JS, Angular, Python, sklearn) *CMU Fall 2018*
Developed JS/Python backend, and co-created Angular UI for Educational AI that implements machine learning, move-reversibility, and mixed-initiative feedback to teach card game (Project ongoing)

Education

Carnegie Mellon University
Pittsburgh, PA August 2019
School of Computer Science
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

Web Development
HTML, CSS, Javascript, node.js,
Sails.js, Angular, AngularJS, jQuery

Data Science
Python, NumPy, pandas, sklearn,
Jupyter Notebooks; VBA (Excel)