**RYAN ERICKSON**

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PROFESSIONAL PROFILE

Passionate about exploring and creating software to improve business efficiencies using strong interpersonal skills and avid discovery and research techniques, while also being dedicated to continual learning as demonstrated by:

* 10+ years working in engineering education roles, leading peers, professionals, and students through collaborative work to meet significant milestones and achieve rewarding goals
* 6+ years researching, developing, and teaching Science, Technology, Engineering, and Mathematics (STEM) curriculum to both students and educators
* 2+ years coordinating and leading the Makerspace classroom, introducing students to the most current technology
* 1+ year learning, exploring, and utilizing self-taught programming languages and tools

KEY SKILLS

* **Languages: Python, JavaScript, HTML5, CSS3** 
  + Python Libraries Used:
    - Flask: Web framework used for PoliticalHangman.com and Alerted.io
    - Sqlite: Used for database testing before production push
    - SQLAlchemy: SQL Toolkit used for data input, updates, query, etc., for PoliticalHangman.com
    - Tweepy: Twitter API integration for JSON Blob requests for user specified politician tweets
    - Bs4: Website parser for automated checks on status changes for 600+ politicians
    - Others: Oauthlib, Requests, urllib3, Lxml, Pickle
* **Tools and Frameworks: PostgreSQL, PyCharm, Heroku, Bootstrap** 
  + PyCharm used as primary IDE with github and Heroku integration for personal project infrastructure
  + PostgreSQL declaration and mapping through SQLAlchemy ORM
  + Heroku CLI used for deployment of projects through github integration and Heroku PostgresDB management
* **Proficient in CAD programs: AutoDesk Fusion 360, OnShape**

WEB PROJECTS

**POLITICALHANGMAN.COM**

* Classic “Hangman” with a new twist
* Utilizes politicians’ most recent Tweets as the mystery phrases to be uncovered
* Used: Python, Postgres, Flask, Twitter API, Bootsrap, Heroku

**THWACK.IO**

* Recreation of the popular game “Pong” with the introduction of Side A vs. Side B competition
* Both desktop and mobile friendly
* Used: Javascript, CSS3, HTML5, Heroku

**ALERTED.IO (currently developing)**

* Weather alerting application
* User identifies specific weather parameters that will initiate a SMS message alert to their mobile phone
* Used: Python, Flask, Postgres, Heroku, Bootsrap, WeatherUnderground API, Twillio API

GITHUB PROJECTS

**HANGMAN SOLVER**

* Solving Algorithm for Political Hangman
* Achieved ~80% accuracy for guessing unknown phrases
* Used: Python, Postgres, NLTK library

WORK EXPERIENCE

**Educational Consultant June 2016 – Present**

*Stratasys and Makerbot Eden Prairie, Minnesota*

* Developed technology education content to meet annual Sales and Marketing goals
* Presented current technology and educational content at National Science and Technology Education Conferences in 2015, 2016, and 2017
* Designed and hosted 3DP webinars for Stratasys, Makerbot, and key channel partners
* Member of Stratasys Educational Advisory Board

**Makerspace Coordinator July 2015 – Present**

*Independent School District 196 Apple Valley, Minnesota*

* Pioneered the first District 196 Makerspace – a classroom where students are introduced to, and have the opportunity to utilize, innovative technologies (programming, CADing, robotics, graphic design, etc.) to prepare them for STEM careers in the future
* Created the Education 3D Printing Guide and presented at TIES 2015
* Developed and taught coding curriculum, teaching students the basics of statically typed languages
* Implemented the use of an Augmented Reality Sandbox using Ubuntu and compiled on Unix CLI

**Engineering Teacher February 2012 – June 2015**

*Independent School District 625 St. Paul, Minnesota*

* Collaborated with the district-wide science educators to create the K-5 Curriculum and Standards Guide
* Created and executed STEM curriculum, tailoring content to fit students’ educational needs

**Chinook Helicopter Flight Engineer January 2007 – January 2013**

*Minnesota Army National Guard St. Paul, Minnesota*

* Maintained Chinook Helicopter integrated systems to sustain flight readiness
* Deployed to Iraq in support of Operation New Dawn from November 2010 – November 2011
* Flew over 500 hours in support of Operation New Dawn

EDUCATION

**Masters of Science in Educational Technologies Graduated January 2017**

*Concordia University St. Paul, Minnesota*

**Bachelor of Arts in Elementary Education Graduated May 2010**

*Bethel University St. Paul, Minnesota*

CERTIFICATIONS AND AWARDS

**MN Army National Guard Soldier of the Year Received May 2008**