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Summary of Qualifications

- Python programming skills and experience with numerous libraries including PIL, Pandas, MDP, scikit learn, TensorFlow, and matplotlib.
- Numerous projects in Java applications development.
- Eloquent object oriented design with UML.
- Algorithm development for data visualization, classification, and imputation.
- Mean stack development with Meteor.
- Report generation in bioinformatics.
- Unity game engine development in C# with Leap motion integration.
- Bash and powershell fluency as a daily Unix user since 2013.
- Exposure to SQL and NoSql databases.
- LAMP stack (Linux Apache Mysql Php) familiarity.
- Practice R programming in academia.
- Experience in Javascript development.
- Student at Penn State studying Aerospace engineering with exposure to programming in C++ and Matlab.
- Student at UCONN studying computer science and engineering with Java.

Data manipulation for the Nelson Lab   August 2016 - July 2017

- Used Pandas for data sets that are too large to read in with python's built-ins.
- Performed text mining in order to extract similar biological processes with different titles.
- Provided graph visualization in pursuit of developing a lineage map for the mouse embryo, using open source tools such as vis.js.
  https://krewn.github.io/Goverview/overview.html
- Executed table joins to amalgamate disjoint data sources.
- Data Modeling for collaboration of disparate data sources.

Previously at The Nelson Lab at UCONN   December 2013 - May 2015

- Performed dimensional reduction by Euclidean methods and PCA.
- Partitioned data by clustering using Scikit Learn and R.
- Report generation using python to generate browsable (HTML) documents.
- Worked with a skilled multifaceted team. Programming ability without the bench skill in biology doesn't get you far. I could have never done it alone.
- Interfaced with high performance computers and legacy projects to provide the team access to everything at their disposal.
- Automated data manipulation and statistical summaries using python and R drawing from CSV and SQL data sources.
- The below link is genetic expression profiles as skin cells reprogrammed to be stem cells. Red is on blue is off. The top is skin and the bottom is stem cell.
  http//krewn.github.io/Reprogramming/MonoVPoly/TimeSortOneB.html

Internship and Apprenticeship

A100 apprenticeship with Independant Software   **March 2016 - May 2016**

- Practiced mean stack development to build database powered websites.
- Learned Meteor as a central framework tying together HTML CSS JS Handlebars and MongoDB.
- Embraced agile methodologies to coordinate responsibilities between a team.
- Communicated with Slack, Trello, Gmail, and Hangouts.
- Outlined Data Modeling for backend on personal and client products.
  http//krewn.github.io/bukeVote/

Intern at Gristmill Builders   **May 2013 - August 2013**

- Absorbed exposure to low energy and low environmental impact buildings with Gristmill focused on salvaged materials, renewable energy sources and low VOC emission building practices.
- Learned concepts in net metering and net zero buildings as their flagship project (The Energy Mill) is a net zero building implementing solar power, solar thermal water heating, and geothermal heating. A large part of my job was documenting the energy profile of that building, and the materials and products used in its construction.
- Collected data for efficiency Vermont Grants resulted in $20,000 coming back to the company.
- Provided support in event planning and execution (Invitations/ preparations)
- Prepared charts and graphs with Octave (Open Source Matlab)

Hackathons

Leap Motion Accelerator   **July 2013 - August 2013**

- Implemented Unity 3d input devices making a hand in 3d space the controller.
- Headed project design and technical planning as the technologies and interactions required for a finished project were laid out.
- Incorporated third party code such as the hand skeleton used to display the hand on screen.
- Performed licensing research as the usability of various technologies in the project were reviewed.
- Used the Leap motion API was to define a click action where icons could be selected in space on the screen by gestures of the hand in space.
  https//github.com/Krewn/LIOS

Pearson   **March 2013 - May 2013**

- Created a dynamic mesh in Unity 3d as 4 dimensional graphing calculator.
- Programmed using C# given the options JS, C# and Boo for Unity.
- Introduced to the concept of API seeing the person API.
  https//github.com/Krewn/BoardSpace

Educational Experience

Programming at UCONN   **2014-2015**

- Used java in data structures to create linked lists and implement sorting algorithms in addition to covering topics such as recursion and iteration.
- Built Tetris in an introduction to java.
- Participated in a team of four to build a graphic text editor for java.
- Completed Statistics homework in python and R.
- Focused on popular algorithms in genetics academia in Computational Genomics and Bioinformatics.
  https//github.com/Krewn/Tetris
  https//github.uconn.edu/TeamGTEFP/GTEFP

Programming at Penn State   2012-2013
- Created a row reduction algorithm for linear algebra. (see link below)
- Honed my mathematics skills in calculus.
- Found my passion in computer science during an introduction to Matlab, C++, and Microsoft Access.
- Plotted figures for for lab reports in chemistry using Matlab.
- Drafted my first electrical field visualizer with Matlab in physics.
  https//github.com/Krewn/KRowReduction/blob/master/main.cpp

Education
- Three semesters in Aerospace Engineering at Penn State. (Dean's list)
- Two semesters computer science and engineering at UCONN. (Lab work)

Technical Skills
- Model View Controller (HTML, CSS, JS)
- Scripting (Python, Bash, R)
- NoSql Databases (MongoDB , FireBase)
- Relational Databases (MySql , Microsoft Access)
- 3D Graphics and interfaces (C# and Unity)
- WordPress Admin (LAMP)
- Object Oriented Design (C, C++, Java, UML Diagrams)
- High dimensional calculus and differential equations.
- Elementary statistics

Online Presence
- **Github https//github.com/krewn**
- **Gists https//gist.github.com/krewn**
- **Cover Page http//krewn.github.io/**
- **StackOverflow http//stackoverflow.com/users/2334254/kpie**
- **Honorable mention on my favorite youtube channel https//www.youtube.com/watch?v=SSu00IRRraY**