Dennis Tekell

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Experience

Dec. 2018 – Present **Software Engineering Intern**, *Netrique*, Dublin, CA.
- Currently enabling HTTPS on the company website.
- Optimized data entry and management by creating Python scripts for automated data processing, decreasing total time spent by 3-5 hours per week.

Aug. 2017 – Feb. 2018 **Undergraduate Researcher**, *Lawrence Berkeley Lab - Mueller Research Group*, Berkeley, CA.
- Researched towards a high-powered laser SEM component to improve electronic phase contrast microscopy.
- Analyzed the scattering rate of light to determine the cleanliness of mirrors used within our lasers, allowing us to quantify harmful defects on the mirrors.

Aug. 2014 – May 2016 **Undergraduate Researcher**, *Micro-Mechanical Methods for Biology Laboratory*, U.C. Berkeley.
- Developed photolithography-designed 3D-printed molds to fabricate microfluidic devices.
- Ran Monte Carlo simulations in Python & SolidWorks to estimate flow rate, potential obstructions of flow path, and laminar vs. turbulent flow predictions.
- Sorted results and integrated them into a research paper, which was published in *Nature*; inventions from the project are currently being patented.

Jun. 2014 – Aug. 2014 **Biochemistry Intern**, *Sandia National Laboratories*, Livermore, CA.
- Developed a targeted drug delivery device via biologically gated porous silica nanoparticles.
- Used Python & SQL to input microscopy photos, measure brightness of microparticle beads, and store data.

Education

Jun. 2015 – Aug. 2018 **U.C. Berkeley**, *BA in Physics, Applied Mathematics*, Berkeley, CA .
Cumulative GPA: 3.75

Feb. 2018 – Jun. 2018 **Yonsei University**, *UCEAP*, Seoul, South Korea.
Education abroad program to study in a different environment/culture and improve Korean language skills.

Projects

Nov. 2018 **Scheme Interpreter**, *Python, Scheme*.
- Built a Scheme interpreter within the Python shell as a properly functioning Read-Evaluate-Print Loop (REPL).
- Developed a program in Scheme to test the interpreter, which included functions to merge lists, partition lists, and list all possible sums of nodes from a tree.

Oct. 2018 **Ants vs. Bees Tower Defense**, *Python*.
- Created a *Plants vs. Zombies*-styled tower defense game with various types of bees that can be built to defend against enemy ants.
- Utilized object-oriented design and inheritance to implement ants, bees, etc.

Sep. 2018 **Twitter Trends Analysis**, *Python*.
- Constructed a program that reads in databases of tweets and word-sentiment correlations to analyze them and calculate an aggregate sentiment assessment.
- Created an expanded analysis by breaking down tweets and color mapping sentiment per state.

Technical Skills

Proficient: Python, SQL, Ruby, LaTeX

Competent: JavaScript, Node.JS, HTML, MATLAB, LabVIEW, SolidWorks

Extracurriculars

Jan. 2014 – Aug. 2018 **President**, *British Parliamentary Debate*, U.C. Berkeley & Los Medanos College.
- Competed at a large number of tournaments each year, including the U.S. Championship 3 times and the World Championship in 2017. Resulted in over 10 speaker and placement awards – 3 first place awards.
- Spearheaded efforts at LMC to raise $12,000 by student government and corporate sponsorships, a nearly 100% increase of the budget. Aided in raising $14,000 at Berkeley by hosting a high school debate tournament.