

Dennis Tekell

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📄 <https://dennistek.github.io/>

Experience

- Dec. 2018 **Software Engineering Intern**, *Netrique*, Dublin, CA.
 - Present
 - Maintain several of the company's websites and strengthen website security.
 - Optimized inventory management system by creating Python scripts for automated data processing, decreasing total time spent by 3-5 hours per week.
- Aug. 2017 **Undergraduate Researcher**, *Lawrence Berkeley Lab - Mueller Research Group*, Berkeley, CA.
- Feb. 2018
 - 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 **Undergraduate Researcher**, *Micro-Mechanical Methods for Biology Laboratory*, U.C. Berkeley.
- May 2016
 - 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 **Biochemistry Intern**, *Sandia National Laboratories*, Livermore, CA.
- Aug. 2014
 - 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 **U.C. Berkeley**, *BA in Physics, Applied Mathematics*, Berkeley, CA .
- Aug. 2018 Cumulative GPA: 3.75
- Feb. 2018 **Yonsei University**, *UCEAP*, Seoul, South Korea.
- Jun. 2018 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 **President**, *British Parliamentary Debate*, U.C. Berkeley & Los Medanos College.
- Aug. 2018
 - 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.