Tai Kao-Sowa

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EDUCATION

Stanford University **Stanford, CA**
BS Candidate in Bioelectrical Engineering *Expected Graduation: June 2020*
GPA: 3.96
Relevant Coursework: *Neuroelectrical engineering, Digital System Design, Baremetal Computer Systems*

Thomas Jefferson High School for Science and Technology **Alexandria, VA**
Biotechnology Lab *September 2012-June 2016*
GPA: 4.45
Relevant Coursework: *DNA Science, Neurobiology, Organic Chemistry, Analog Electronics, Multi/Linear*

EXPERIENCE

Stanford Integrated Biomedical Systems Lab **Stanford, CA**
REU Intern *Summer 2017*

- Worked on chip design for wireless hippocampal engram circuit neuron stimulation. Potential for memory recovery and reconsolidation in amnesic mice. Worked with Cadence circuit simulations.
- Worked on a team in Dr. Ada Poon's lab led by Mazi Taghivand. Graduate advisor: Yi Liu

TJHSST Biotechnology Lab **Alexandria, VA**
Original Researcher *September 2015 – June 2016*

- Investigated the effect of Ara h2 peanut allergen on PHA-induced canine dendritic cells as a possible pathway to atopic dermatitis via errant activation.
- Conducting original research with Hasan Ahmad under Dr. Cobb.

Georgetown AVRIC Lab **Georgetown, DC**
Original Researcher *Summer 2015*

- Investigated the effect of folic acid on Treg cell induction in vitro as a possible natural treatment for autoimmune disease.
- Conducting original research sponsored by Dr. Bellanti under Georgetown's department of Microbiology and Immunology.

Georgetown AVRIC Lab **Georgetown, DC**
Research Assistant *Summer 2014*

- Interned in Dr. Joseph Bellanti's lab investigating the development and clinical application of interferon gamma release assays (IGRAs) on Tuberculosis.

SKILLS

- Python, C, C++, Java, MATLAB
- Cadence & Spectre circuit simulation, Verilog FPGA programming, Arduino, PCB design (Altium)
- Flow cytometry, qPCR, western/southern blotting, polyacrylamide & PAGE gels, electrophysiology

PROJECTS/ACTIVITIES

- Stanford Student Space Initiative, biology team. Working on a device that will synthesize DNA in space. Design involves PCB design (altium), microfluidics, and enzymatic DNA synthesis with TDT
- Built MaTricks, an interactive linear algebra calculator iOS app for Stanford Treehacks 2017
- Built EnigmaMachine, a baremetal C program written on a pi A+ to emulate the WWII machine.
- Stanford Club Brazilian Jiu Jitsu (responsible for club outreach)
- Stanford Club Swim team
- Lung Chuan Fa kung-fu (2004-2017)

LINKS

- Github: github.com/taikaosowa11
- Personal site: tkaosowa.us
- LinkedIn: www.linkedin.com/in/tai-kao-sowa-967382120/