David Bernstein

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Objective

My primary interests lie in combining disciplines in innovative ways, primarily biomedical engineering and computer science. I am always open to learning about something new because I know that I will be able to apply that knowledge to other areas of interest. The end goal for my education is to create an organic computer whose components exists in the form of DNA.

Recent Projects

- Digital Digit Recognition - program for analyzing bitmaps and locating characters and numbers in them.
- Image Rotation and Compression – customized program for compressing, decompressing, and transforming images
- Bitpack – program to manipulate individual bits in a computer to obtain an efficient packing structure.
- Waitlist Roster Implementation – combines several data structures to model the school's course registration site.

Skills

Proficient in C, C++, HTML, Mathematica, Visual Basic, Microsoft Office, iWork, Windows, iOS, and OSX

Lab experience working with DNA, cell cultures, tissue models, developing medical devices, and cell based assays

Additional Skills: Circuit Analysis, Spectrophotometry, Gel Electrophoresis, Teaching, Sailing, Guitar, and Cooking

Education

Tufts University, Medford MA — September 2013 - Present

- Majoring in Biomedical Engineering, concentrating on Genetic Engineering
- Minoring in Computer Science
- GPA: 3.29 (Deans List)
- Related Coursework: Circuits, Data Structures, Statics & Dynamics, Single and Multivariable Calculus, Discrete Mathematics, Biology, Chemistry, Physics, Special Topics in Biomedical Engineering, and Expository Writing

The Galloway School, Atlanta GA — August 2009 – May 2013

- GPA: 4.0
- Bilancio Comprehensive Science Award for being the student in the school with the utmost commitment to science.
- Columbia Book award for exemplary leadership and academic rigor

Experience

Research Assistant — August 2014 - Present

I work in the Tissue Engineering Research Center on the project for improved would healing through controlled electrical stimulation. I assist in the cell passages, trypsinization, cell counting, and skin models creation using human fibroblast and keratinocyte cells, as well as the development of wound healing devices. . The end goal of the experiment is to optimize silk-electrode devices for wound healing needs, record wound bed electrical potential, and direct wound healing by manipulation of this potential.

Resident Assistant — August 2014 - Present

As an RA, my responsibilities include counseling and advising all students within my hall, supervising the halls while on duty at night, and providing residents with a wide variety of resources across campus.