TSION BEHAILU

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Education

University of California, Berkeley *August 2011 - May 2015*

Major: Computer Science

Skills

- Java, C, Python, Matlab, LaTeX, AutoCAD
- Windows, OSX, Coda, Eclipse, XCode, Hadoop, Logism

Projects

Processor Design *November 2013*

`https://github.com/tbehailu/Processor.git`

- Used Logisim to create a 16-bit two-cycle processor. Designed the processor's register file to manage the four 16-bit registers in the Instruction Set Architecture (ISA) and the ALU to do a total of ten operations. Built the Data Memory using a built-in Logism RAM module. Wrote two MIPS functions for additional testing of the final CPU design.

BestRegards.co: Handwritten Thank You Cards Generator *October 2013 - Present*

`www.bestregards.co`

- Co-founded a web service that automates handwritten thank you cards at the 2013 AngelHack Hackathon. Implemented a custom-built calculator in JQuery that informs users how much time they would save by using BestRegards from the number of attendees at their wedding. Used gumby, a responsive CSS framework, and developed our CSS and HTML skills. Made use of Firebase as a backend. Built an ecommerce platform and integrated Stripe's API to accept payments.

MIPS Instruction Set Emulator *October 2013*

`https://github.com/tbehailu/MIPS-Simulator.git`

- Created an instruction interpreter for a subset of MIPS code. Provided the machinery to decode and execute a couple dozen MIPS instructions.

Co-occurrence in a large dataset *September 2013*

`https://github.com/tbehailu/Co-occurrence-in-a-large-dataset`

Goal: Given a target word, identify which words in a body of text are most closely related to it by ranking each unique word in the corpus by its co-occurrence rate, determined using a given co-occurrence rate algorithm, with the target word.

- Implemented MapReduce jobs in Java, which calculate co-occurrence of a target word in a large dataset.
- Ran MapReduce on several datasets stored on Amazon's Simple Storage Service (S3). Used Amazon's EC2 service, which rents virtual machines by the hour, by starting up a Hadoop cluster.

Bird Bounce: An iOS Mobile Game *October 2013 - Present*

`https://tsion_behailu@bitbucket.org/tsion_behailu/bounce.git`

- Developed an iOS mobile game with a partner on Kobold2D, a 2D game framework. All graphics were done using Adobe Illustrator.

The Beauty of Knotted Sculptures *August 2013 - December 2013*

`https://github.com/tbehailu/knots.git`

Mentor: Prof. Carlo Sequin, Electrical Engineering & Computer Science Department

- Analyzed and deformed selected knots from knot table into 2D diagrams in order to find symmetry and create 3D model with the use of AutoCAD as a research apprentice.

Coursework

- Machine Learning
- Data Structures and Programming Methodology (*Java*)
- The Structure and Interpretation of Computer Programs (*Python/Scheme*) (*C Programming Language*)
- Introduction to Computer Programming for Scientists and Engineers (*Matlab*)
- Self-Paced C for Programmers
- Introduction to Digital Electronics
- Discrete Mathematics and Probability Theory
- Introduction to Design and Analysis (*Autodesk Inventor 3D CAD Software*)
- iOS Game Development DeCal

Experience

Research Assistant/Marketing Director - *Institute for Law and Policy Planning, Berkeley, CA* *October 2011 - Present*

- Shaped the marketing structure of ILPP to produce better results in both news searches and RFPs, ultimately leading to more jobs for the organization.

Intern - *University of Georgia, Griffin, GA* *June 2009 - July 2009*

- Worked alongside a certified mentor in the Agricultural & Biotechnological Department at the University of Georgia (UGA) Griffin Campus and conducted research on evapo-transpiration of soybeans.

Activities

Square College Code Camp *January 2014*

One of twenty female CS students chosen from the U.S. and Canada to participate in a four-day immersion program at Square HQ. Completed workshops in CSS architecture, iOS Development, and Security Engineering.

Winter Academic Training Camp (WAT Camp) - *Computer Science Instructor* *January 15-19, 2014*

`www.tsion.me/wat-camp-2014`

Instructor for *CS61A: Structure and Interpretation of Computer Programs* at WAT Camp. Covered elements of programming, lambda functions, environment diagrams, sequences, objects and classes, and more. Course was conducted in Python.

Undergraduate Study Committee - *L&S Computer Science Representative* *September 2013 - Present*

Aid in the making of departmental decisions with the Computer Science Department faculty and staff as a representative for Letters & Science Computer Science students.

Cal N.E.R.D.S. - *Researcher for Cal New Experiences for Research & Diversity in Science* *March 2013 - Present*
Cal Hawaii Dance Club - *Performer* *Dancer 2013 - Present*
HUSA - *Member of Horn of Africa Student Association* *Dancer 2013 - Present*