TSION BEHAILU

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Education

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

Major: Computer Science

Skills

- Java, Ruby, C, Python, Matlab, LaTeX, AutoCAD
- Eclipse, Teradata, Ruby on Rails, Coda, XCode, Hadoop, Logism

Experience

Software Engineering Intern - *Groupon, Palo Alto, CA* *June 2014 - August 2014*

- Automated the collection of page performance metrics for the SEO team. Wrote clients for various external APIs, such as Dotcom-Monitor and Pingdom, to collect the performance statistics of SEO pages and integrated these into a rails application. Scheduled cron jobs regularly pull the page performance data to a MySQL database, and then add the data to Teradata. Application was deployed to production and is now accessible to all Groupon teams.

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.

Projects

Pacman Search & Multi-Agent Pacman *February 2014*

- Built general search algorithms and applied them to pacman agent to find paths through a maze. Designed additional agents for game, implementing both minimax and expectimax search.

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 using Ruby on Rails. 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. 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

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

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*
HUSA - *Member of Horn of Africa Student Association* *August 2012 - Present*