Jesse Zhang

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EDUCATION

Bachelor of Science, Computer Engineering
University of Illinois, Urbana, Illinois
Relevant Coursework: ECE 391 Computer Systems Engineering, CS 225 Data Structures, ECE 290 Computer Engineering I, ECE 210 Analog Signal Processing, INFO 490 Data Science

AWARDS

National Science Foundation REU Fellowship

PUBLICATIONS

Kim, M., **Zhang, X.**, Milenkovic, O. (2014). *Parallel Compression of Metagenomic Sequences via Extended Golomb Codes* Selected for a platform presentation at the Biological Data Science Workshop, Cold Spring Harbor Laboratory, November 2014

WORK EXPERIENCE

Fulcrum GT – *Software Engineering Intern* Summer 2015 - Now

- Launched Epoch, a legal time entry solution, at ILTA 2015
- Primary iOS backend developer – responsible for designing and implementing the data model in Core Data for Epoch
- Explored location and physical activity tracking, as well as geo-fencing, using Core Location and Core Motion frameworks
- Designed overall program flow for asynchronous activities using NSNotification-Center, GCD, delegates, and closures

ECE 391 – *Course Staff* August 2015 - Now

Coordinated Science Lab – *Research Intern* Summer 2014 - Summer 2015

- Intern with the Bioinformatics Group of the ECE Department at UIUC
- Worked with Perl and Java to automate parallelized DNA compression and maximize DNA compression ratio
- Developed the Extended Golomb Code compression scheme adapted for DNA read-specific statistical distributions

PROJECTS

ECE 391 – *x86 Assembly, C*
Za Big New OS – Linux-like operating system

- Implemented the PIC configuration code and developed the interrupt handlers for the keyboard and RTC
- Implemented the Linux ext2 file system with both read and write functionality
- Developed the system calls for device and file I/O as well as the execution and halting of a task
- Implemented the C Standard Library as well as C runtime in conjunction with the native runtime

BoilerMake – *C, Java, Objective-C*
HackedReality – virtual reality using Google Cardboard (*Winning project 2014)*

- *Developed a driver for a DDR Dancepad to mimic the omni-directional treadmill and implemented dynamic remapping of the dancepad buttons*
- *Used the magnetometer in Android phone to track the user's orientation*
- *Used the Pebble smartwatch to track the user's body motions*

EXT9000 – *Linux EXT2/3/4 interactive parser in C for fun* *Work in progress*

ACTIVITIES

IEEE@UIUC

- *IEEE Projects Committee*

ACM@UIUC

- *SIGDave - various short-term projects*

TECHNICAL SKILLS

Languages: C, x86 Assembly, Swift, C++, Perl, Java, Objective-C