

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
- Primary iOS backend developer – responsible for designing and implementing the data model in Core Data for a legal time entry solution
 - 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 NSNotificationCenter, GCD, delegates, and closures
- 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*
 - *IEEE Hackathon 2013 – Java*
 - *PairTunes - a music streaming application that creates ad-hoc server-client networks across multiple computers to achieve concurrent surround sound playback*
- ACM@UIUC**
- *SIGDave - various short-term projects*
 - *SigOPS - Special interest group in operating systems*
- TECHNICAL SKILLS** Languages: C, x86 Assembly, Swift, C++, Perl, Java, Objective-C