

# Matthew R. McDonald

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**EXPERIENCE**     *Research Assistant* (file systems forensics research)     June 2013 - November 2013

- Wrote and tested file system forensics software intended to benefit law enforcement agencies, which extracted and verified data from file systems so as to improve the credibility of evidence brought to court.
- Written in Java, Scala, Coq, and OCaml.

*Programming Competitor* (DePaul Lost Souls)     September 2013 - November 2013

- Competed in the 2013 ACM international collegiate programming contest.
- Collaborated with a team of 3 on solving programming challenges in Java.
- Placed 31st out of 129 teams.

**PROJECTS**     *zipper*     [github.com/mmcdon20/zipper](https://github.com/mmcdon20/zipper)

- Scala library for writing collections of files to zip files, and extracting zip files.
- Wraps the Java standard library using `java.io.File` and `java.util.zip.ZipFile`.

*Interactive Map of Crime in Chicago*     [github.com/mmcdon20/chicago-police\\_map](https://github.com/mmcdon20/chicago-police_map)

- Ruby on Rails application that uses data sets on police beats and criminal activity from the City of Chicago data portal.
- Data is presented with an interactive map made with Leaflet.

*JamTunes*     [github.com/mmcdon20/MusicApp](https://github.com/mmcdon20/MusicApp)

- Web2Py application for social music sharing and discussion.
- Created in collaboration with other DePaul students.

**EDUCATION**     *Bachelor of Science, Computer Science* (3.95 GPA)     December 2013  
DePaul University - Chicago, IL

Relevant Courses	
• C++ for Programmers	• Intro to Compiler Design
• Computer Systems I and II	• Java for Programmers
• Database Systems	• Object Oriented Software Development
• Data Structures and Algorithms in Java	• Object Oriented Enterprise Application Development
• Design and Analysis of Algorithms	• Problem Solving for Contests
• Discrete Math I and II	• Programming Language Concepts
• Distributed Systems	• Software Projects
• Frameworks for Web Application Development	• Software Testing
	• Technical Writing
	• Web Development I

**SOFTWARE**     *Programming Languages:* Java, Scala, Ruby, Python, and others  
*Other Languages:* SQL, HTML, XML, CSS, JSON  
*Tools:* IntelliJ Idea, RubyMine, PyCharm, Eclipse, Visual Studio, Git  
*Libraries & Frameworks:* Rails, Web2Py, JUnit, Bootstrap, Leaflet and more

**AFFILIATIONS**     National Society of Collegiate Scholars (NSCS)  
Association for Computing Machinery (ACM)