

## 1 Applicant's Name:

Lyle Franklin

## 2 Long Term Degree Objective:

M.S. in Computer Science

## 3 Research Experience:

I have participated in two Research Experience for Undergraduates (REU) programs, one at the University of Notre Dame and the second at the University of Illinois at Urbana-Champaign. At Notre Dame, I worked with a partner to create a data visualization tool for use in a sociological study. Our project was well-received and we won first place in the program's poster competition. At UIUC, I worked independently to create an automated refactoring plugin. My tool was accepted as an official patch to the NetBeans IDE open source project. I also worked with another intern to create a second refactoring plugin and to write a research paper detailing the development and empirical evaluation of our tool. We submitted the paper to ICSE'13.

## 4 Publications:

### **Lambda-enabled Refactorings**

G. Alexandru Gyori, **Lyle Franklin**, Jan Lahoda, Danny Dig

Submitted to ICSE'13 - Research Paper Track

Technical Paper URL: <https://netfiles.uiuc.edu/dig/papers/lambdaRefactoring.pdf>

### **LambdaFicator - From Imperative to Functional Code through Automated Refactoring**

**Lyle Franklin**, G. Alexandru Gyori, Jan Lahoda, Danny Dig

Currently under review at ICSE'13 - Demonstration Track

Demo URL: <http://www.youtube.com/watch?v=EIyAflgHVpU&hd=1>

### **Empirically Evaluating the Impact of Morgan's Raid**

**Lyle Franklin**, Paul Gestwicki

To be submitted to Meaningful Play '13

## 5 Future Research Interests:

During my time in graduate school, I will focus on expanding my knowledge of software engineering. Specifically, I am interested in developing tools to improve developer productivity, such as automated refactorings, bug detection software, and tools to enforce best practices. To accomplish this, I will take courses in software engineering, programming languages, and compilers during my graduate education. The undergraduate versions of these courses were the most useful of my education, and these skills proved invaluable in my internships.

## **6 Other Comments:**

I am applying to Purdue University because the interests of its faculty closely match my own. During my time in graduate school, I will focus on software engineering and programming languages. Purdue employs experts in these fields such as Dr. Charles Killian and Dr. Jan Vitek, whose research in software engineering and programming languages has produced several impressive software analysis tools. I look forward to learning from these professors and the other world-class faculty and students at Purdue University.