DERIC PANG

(702) · 606 · 5830 ◇ pderichai@gmail.com
4233 9th Ave NE ◇ Seattle, WA 98105
https://github.com/pderichai

EDUCATION

University of Washington, Seattle September 2014 - Present
B.S. in Computer Science & Engineering (Sophomore)
Dean's List
Overall GPA: 3.86/4
Coursework: Computer Programming I & II, Foundations of Computing, Hardware Software Interface, Software Design and Implementation

EXPERIENCE

Undergraduate Researcher March 2015 – Present
University of Washington Computer Science & Engineering *Seattle, WA*

- Worked as part of the Programming Languages and Software Engineering group.
- Wrote approximately 3000 lines of code in the summer of 2015.
- Studied patch minimization and delta debugging—currently in the process of authoring a paper.

Front End Developer September 2015
AT&T Mobile App Hackathon *Seattle, WA*

- Worked to create *Weelz*, a crowdsourced mobile bike hazard notification android application.

Chamber Music Club Officer June 2015 – Present
Project and Event Planner *University of Washington*

- Arranged members into chamber groups and planned concerts quarterly.

PROJECTS

Patch Minimizer March 2015 – Present

- Automatically isolates buggy code between two versions of a program.
- Approximately 2000 lines of code.
- Can be used with any language or project.

Diff-Utils August 2015

- A diff utility that allows for the syntactically correct manipulation and modification of unified diff files.
- Created for use in patch minimization research.

Weelz September 2015

- A crowd sourced bike hazard notification application.
- Worked on front end android application development.

SKILLS

Proficient In	Java, Linux, Bash
Experience With	C, HTML & CSS, JavaScript, Android SDK, Google Maps API
Tools	Git, Emacs, Vim, Defects4J

ESSAY QUESTIONS

Question 1

· My passion for computer science was solidified by the research I started towards the end of my freshman year. Once I started working in the Programming Languages and Software Engineering group, I knew that I wanted to be a software engineer for the rest of my life. The work I did never really felt like work—it was as if somebody was paying me to have fun. The joy I experience from overcoming challenging problems with my knowledge of coding is like no other.

My goal for this upcoming summer is to learn as much as I can. As a Google intern, I would get to work alongside the best engineers in the industry and influence some of the most widely used products on the planet. This is the kind of experience I am looking for in order to become more knowledgeable and capable. Before college, I had not done much coding, and I think this forced me to be an effective learner. In less than five months, I went from barely being able to code to working alongside grad students and professors in research. I know that if I have the opportunity to intern at Google, I would be able to learn a tremendous amount.

Question 2

· I am so glad you guys asked this question because I love talking about my work!

For the research paper I'm currently working on, I built a patch minimizer in Java. In order to build the patch minimizer, I had to overcome many technical challenges, one of which was the syntactically correct manipulation of unified diff files.

Unified diff files are tricky to change. Consider changes that are to be *removed* from source code after a patch is applied. In order to "remove" these changes from a patch, it's necessary to only remove the '-' sign at the beginning of the line so that the affected lines remain as context for the diff. However, if the context information of the patch isn't changed, it's possible that removing the '-' sign from the patch will render it inapplicable.

As you can see, this problem turned out to be quite tricky, and was sort of a side project on its own. At first, I tried to use various libraries I found online to solve the problem, but none of them were adequate. In the end, I wrote my own program to do this—one that I am quite proud of. Check it out on my GitHub!

Question 3

· Diversity in the workplace is extremely important because it allows for ingenuity. A team composed of people who are very similar makes it tough to innovate—many angles of a difficult problem must be explored before a new solution can be found.

I like to think that I represent diversity in the tech industry well. In addition to studying computer science, I have competed in violin competitions across the nation and led my high school tennis team to two state championships. I strongly believe that being well versed makes me a better programmer by giving me the ability to approach problems differently and by instilling in me values that are essential to engineering.

Many discussions have been going on recently about the lack of diversity in the tech industry. These discussions are important for the very reasons I just listed—the tech industry needs not only good engineers, but also good engineers that come from different backgrounds and have different ways of thinking. I think the best way to increase diversity in the tech industry is to encourage underrepresented groups to study computer science. Thankfully, this push for diversity is already happening at many schools and universities.