

Project #6 – Report on Great Papers in Programming Languages

CS 152 Section 6 – Fall 2021

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Introduction

In this course we have explored Scheme and Prolog to learn functional and logic programming, respectively, and during the last two weeks of lecture we will explore alternative approaches to object-oriented programming through Smalltalk, Self, and the Common Lisp Object System. I hope all of you have enjoyed this excursion through the principles and paradigms of programming languages.

Before we close out this semester, I want to expose you to quality papers in programming languages. Professor Benjamin Pierce has collected a list of great programming language papers, which can be found at <https://www.cis.upenn.edu/~bcpierce/courses/670Fall04/GreatWorksInPL.shtml>.

Your assignment is to read and summarize one of the papers listed in Benjamin Pierce’s “Great Works in Programming Languages.” However, the following papers on this list may not be selected since these have been or will be covered in class:

- “Go to statement considered harmful,” by Edsger W. Dijkstra.
- “Self: The power of simplicity,” by David Ungar and Randall B. Smith

Please use a search engine or the SJSU Library’s database to find the papers, since unfortunately Pierce’s list does not include links to the papers. You may work in pairs.

Your summary is to have the following format:

1. What research problem is the paper trying to solve?
2. What solution did the authors come up with?
3. How is this solution better than previous solutions?
4. How do the authors evaluate the effectiveness of their solution?
5. In your opinion, how could the authors’ solution be improved upon?

Each summary should be roughly 1-2 pages of text. Please turn in your summary as a PDF document via Canvas.

Since it is hard to develop an objective measure for grading these summaries, any submission that is able to clearly and correctly explain each of the above questions will receive full credit. However, I reserve the right to deduct points for incomplete submissions, submissions that are unclear or incorrect, and submissions with major spelling and grammar errors.