Ziyuan Zhong

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• Github Repo: https://github.com/AIasd

Honor and Award

Academic Commendation *May,2017, May,2016 and May,2015*

At the end of my freshman year and sophmore year, I was commended twice by Reed College for academic achievement.

ACM-International Collegiate Programming Contest -Pacific NW Regional Div1, 28th place *Nov, 2016*

We competed in Division1under the team name AlgoGriffins1. We took the second place out of 10 teams in Northwest Site Div1 at George Fox University and ranked 28th among 77 teams in the whole Pacific-NW regional Div1. Final score board for our local site at : http://acmicpc-pacnw.org/scoreboard/group3.html

ACM-International Collegiate Programming Contest -Pacific NW Regional Div2, 7th place *Nov, 2015*

I and two other Reed students formed a team named AlgoGriffins and competed in Division2. We took the second place out of 19 teams in Northwest Site Div2 at George Fox University and ranked 7th among 75 teams in the whole Pacific-NW regional Div2. Final score board for our local site at : http://www.acmicpc-pacnw.org/ProblemSet/2015/group9.html

Education

Columbia University   NEW YORK, NY

Bachelor degree in Computer Science *2017 – 2019*

I am currently a junior at SEAS.

Reed College   PORTLAND, OREGON

Bachelor degree in Mathematics(Computer Science concentration) *2014 – 2017*

I have finished my three years education at Reed College.

Research Experience

REU CAAR-2017 at University of Maryland, College Park *Jun, 2017 – Aug, 2017*

I worked with professor Tom Goldstein on implementation and benchmarking of phase-retrieval algorithms in both Matlab and Python. Our software package called PhasePack will be published and made open-source soon.

Differential Privacy Reading Group at Reed College *Sep, 2016 – Dec, 2016*

We read papers in Differential Privacy and communicate ideas every week. This group is advised by professor Adam Groce.

GPU Parallel Computing Group *Sep, 2016 – Dec, 2016*

We read papers in parallel computing and implement some fundamental parallel algorithms like prefix sum, radix sort and suffix array construction using cuda. This group is advised by professor Jim Fix.

Programming Skills

Proficient: Python, C/C++

Familiar: Matlab, R, Javascript, HTML/CSS, Latex

Experience: Java, Mathematica, SML of NJ

Project

PhasePack(A software for the phase retrieval problem)   CS department at University of Maryland, College Park

Jun, 5 - Aug,11

I worked in a research group led by professor Tom Goldstein at University of Maryland, College Park on building a high-quality software package in both Matlab and Python on the phase retrieval problem. The package now consists of more than 12 different PR algorithms and supports benchmarking customized algorithm against them on both real-world dataset and synthetic dataset. This package will be made public on professor Tom Goldstein's website soon.

Lemur(A data collector)   Reed College Software Design Studio

May,16 - Aug, 16

I and two other fellow students built this data collector for biology department last summer. The app is a functional open-source web application built using Flask(a popular Python web-framework), JS, HTML/CSS and PostgreSQL. The app now is deployed on Reed CollegeâĂŹs server and used by biology department in their intro-level class for lab data collection. The app was maintained by me for an year and now maintained by CIS at Reed College.
Github repo at: github.com/reed-college/lemur

Finished Math/CS Course list

At Reed College:

MATH 111 Single Variable Calculus Calculus of a single variable by Larson, Hostetler, and Edwards, 8th ed.

MATH 112 Introduction to Analysis Irena Swanson's notes

MATH 211 Multivariable Calculus I David Perkinson's notes and Vector Calculus, 4th ed., by Susan Colley

MATH 212 Multivariable Calculus II David Perkinson's notes and Vector Calculus, 4th ed., by Susan Colley

MATH 331 Linear Algebra Linear algebra by Stephen H. Friedberg; Arnold J. Insel; Lawrence E. Spence, 4th ed.

MATH 121 Computer Fundamentals I Composing Programs

MATH 221 Computer Fundamentals II Jim Fix's notes

MATH 332 Abstract Algebra Abstract Algebra, David S. Dummit, Richard M. Foote, 3ed

MATH 382 Algorithms and Data Structures Introduction to Algorithms by Cormen, Leiserson, Rivest and Stein, 3rd ed.

MATH 387 Computability and Complexity Introduction to the Theory of Computation by Michael Sipser, 2nd ed.

MATH 388 Cryptography Introduction to Modern Cryptography, Jonathan Katz, Yehuda Lindell, 2ed

MATH 442 Topic in Computer System

MATH 391 Probability Probability with Applications and R (2014), by Robert P. Dobrow.

MATH 392 Mathematical Statistics Albyn Jones's notes

At Portland State University:

MATH 256 Applied Differential Equations Differential Equations, 4th ed., Blanchard, Devaney, Hall

Programming Related Work Experience

Reed College Software Design Studio
Intern *Feb, 2016 – May, 2017*
We build softwares to improve our own coding skills and serve Reed community.

Reed College Math Department
Math and Computer Science Tutor *Sep, 2015 – May, 2017*
I tutor sutdents for Math111(Single Variable Calculus), Math112(Intro to Analysis) and Math121(Computer Fundamentals I)

Other Work Experience

Reed College International Student Services
Interconnect Mentor *Aug, 2016 – Dec, 2016*
I helped new-incoming international students to be familiar with school/local culture. I organized monthly group events to help them adapt into local environment and socialize with peers. I did monthly one-on-one mentoring with new students to address specific concerns/problems.

Reed College Math Department
Math Grader *Sep, 2015 – Jan, 2016*
I graded homework for MATH111(Single Variable Calculus).

Reed College Library
System Assistant *Sep, 2015 – Jan, 2016*
I wrote python scripts to help librarians to clean up files automatically.