Zhao Liu

CONTACT	3333 Forbes Ave Pittsburgh, PA, 15213, USA	zhaoliu1996@cmu.edu www.zhao-liu.com

EDUCATION

Carnegie Mellon University, Pittsburgh, PA, USA — Aug. 2019 - Present
M.S. Student, Automated Science, School of Computer Science
Major Courses:

Automation of Science Research	Machine Learning	Algorithms and Advanced Data Structures
Automated Laboratory Methods	Essential Mathematics	Applied Cell and Molecular Biology

Carnegie Mellon University, Pittsburgh, PA, USA — Aug. 2017 - Dec. 2017
Exchange Student, School of Computer Science
Courses:

15-213 Intro to Computer Systems	15-462 Computer Grahpics
36-225 Probability Theory	15-437 Web Application Development

Jacobs University Bremen, Germany — Aug. 2015 - Jun. 2018
B.S. Computer Science

PROGRAMMING C, C++, Python, Golang, Shell script, Haskell, SQL, Matlab, React.js, Latex

PRACTICAL EXPERIENCE

Software Engineer, Aipha Technology, Beijing — May. 2019 - Jul. 2019
• Optimized databases and quries, implemented concurrent web servers, and maintained server clusters, reducing the cost and responding time of the web services by 50%
• Proposed and formulated a question-answer based Mandarin NLP system for financial questions using the BERT model and fine-tuning with financial data

Software Engineering Intern, Infervision Inc., Beijing — Aug. 2018 - Apr. 2019
• Designed and implemented a highly configurable deploying and monitoring infrastructure (React, flask, docker), reducing the time and cost of onsite maintenance by over 40% among over 350 hospitals.
• Built and optimized GPU clusters and GPU resources management systems (Kubernetes, nvidia-docker, glusterfs), accelerating the speed of training multiple models at the same time by 2 to 4 times
• Integrated authentication and authorization methods to the internal services for security reasons

Teaching Assistant, Jacobs University Bremen
Programming in C I, II & Programming in Python I & Electrical Engineering lab   Fall 2016 - Spring 2018
Hold weekly tutorials and office hours; assisted students during the class; graded weekly homework and final exams for four courses and labs over the three years.

RESEARCH EXPERIENCE

Research Assistant, KWARC MathHub, *Advisor: Professor Michael Kohlhase*   Fall 2015 - Spring 2016
Proposed a portal design for viewing and changing the flexiformal mathematics documents. Implemented an earlier version of an interactive web application for mathhub.info

SELECTED COURSE PROJECTS

Scotty3D, 15-462 Computer Graphics, Carnegie Mellon University — Fall 2017
Formulated a 3D interactive graphics software which enables interactive mesh editing, realistic path tracing, and dynamic animation(C++)

Thesis Project, Data Visualization, Jacobs University Bremen — Spring 2018
Designed and implemented a VR(virtual reality) software visualizing high dimensional data (C#, Unity, Google Glasses)

Malloc Lab, 15-213 Introduction to Computer Systems, Carnegie Mellon University — Fall 2017
Implemented a general purpose dynamic storage allocator for C programs. Received full credit (C)

HONORS AND AWARDS Merit-Based Scholarship, Jacobs University Bremen — Fall 2015 - Spring 2018

ACTIVITIES

Jacobs University & Carnegie Mellon University Rowing Team — Fall 2015 - Spring 2018
A varsity rower of the competitive rowing teams of both universities