CHONG SHAO

E-MAIL
cshao@cs.unc.edu

PRESENT ADDRESS
425 Hillsborough ST, APT 6C
Chapel Hill, NC 27514
(919) 619-0326

EDUCATION

University of North Carolina at Chapel Hill, Chapel Hill, NC
Doctor of Philosophy, Computer Science, 2012-2017 (expected)
Advisor: Stephen Pizer

Polytechnic Institute of New York University, Brooklyn, NY
Bachelor of Science, Electrical Engineering and Computer Engineering, 2010-2012
G.P.A. 3.86/4.0

Courant Institute of New York University, New York, NY
Graduate Level Course on Computer Vision, 2011
G.P.A. 3.70/4.0

Nanjing University of Posts and Telecommunications
Electrical and Computer Engineering, 2007-2009
G.P.A. 3.59/4.0

EXPERIENCE

Research Assistant — Computer Science Department, University of North Carolina at Chapel Hill, Chapel Hill, NC — Since August 2012

Conduct research on statistics of objects in context using medial/skeletal models. Result is applied in radiology.

Tutor — Tutoring Center, Polytechnic Institute of NYU, Brooklyn, NY — Spring 2010 - Spring 2012

Helped students solve problems in computer science courses; made mock exams for review purpose. Worked on C++, Matlab and Python programming problems.

Research Assistant — Information Systems and Internet Security Lab, Summer 2011, Polytechnic Institute of NYU, Brooklyn, NY

Worked on problems in image forensics, especially on the problem of fast source camera model identification. Applied Locality-Sensitive Hashing (LSH) method to the problem, analyzed the algorithm, implemented the algorithm and analyzed the experiment result. Wrote formal reports. Gave presentations to colleagues.

Internship — Suzhou Software Testing Center, Suzhou, China — Summer 2008

Worked with experienced engineers on several enterprise software testing tasks.

PROJECTS

Rablo2d Research Project, UNC Chapel Hill Fall 2012

Rablo2d is designed to be a 2D analogy of the more-than-ten-year history software "Pablo" in UNC-Chapel Hill medical image research group. Pablo is a tool in displaying anatomic objects in the form of skeletal models. Pablo also preforms the fitting of a skeletal model to a medical image which is used for object segmentation. In contrast, Rablo2d can also display objects in 2D in skeletal model form. And the goal of creating the 2D analogy of Pablo is to discover the multi-object relationship in terms of statistics. The software is built using the simple GUI framework "rubyshoes". It is written in Ruby, a numerical library in Python is also used.

Tabellae Victus Undergraduate Design Project, NYU-Poly Spring 2012

Tabellae Victus is an implementation of the idea "redefining document". Document should not only contain text or some figures but also more richer form of media such as video and audio. Tabellae Victus is a online document editor and viewer application. HTML5/JavaScript are used in building the front end. JSON is used in communication. Back end is built using PHP. A whole implementation of server was proposed and some initial implementation of the server was completed using C++. This project won the "best design project" in NYU-Poly in the year of 2012. My role in the team was the developer of the front end.

Handheld 3D Scanner Computational Photography, NYU Courant Fall 2011

Implemented "structure from motion" in two ways: Bundler and factorization method. Wrote code to implement factorization method. Applied two matlab toolboxes in camera calibration.

Parallel Sorting Intro to Embedded System, NYU-Poly Fall 2011

Implemented parallel sorting on two Silicon Labs microcontrollers, which involved writing code for communication and sort algorithm.

Arithmetic Logic Unit Intro to VLSI, NYU-Poly Spring 2011

Designed the circuit and layout of an ALU. It contained function ADD, SUB, MUL, LSHIFT, RSHIFT, AND, OR and AND.

Quantum Compilers Physics of Quantum Computers, NYU-Poly Spring 2011

Did a survey on the proceedings of quantum compilers. Studied Dr. Svore's Ph.D. Thesis and Prof. Aho's research. Gave presentations to classmates and professor.

Naïve Bayes OCR SICP, UC-Berkeley Summer 2010

Implemented an optical character recognition system based on a naive Bayes classifier model in University of California, Berkeley summer session class.

Other recent projects can be found on my GitHub page: https://github.com/tingleshao

Number of problems solved independently on Project Euler: 35/417

APPLICATIVE SKILLS

Proficient programming in Matlab, Python, Ruby
Familiar with C++, Scheme, Haskell, HTML/CSS, JavaScript, Java
Experience in developing MVC web applications in Python and Java
Familiar with Linux Administration and Programming
Familiar with CMake
Proficient document formatting using LaTeX
Fluent in English and Chinese

SELECTED COURSES

at University of North Carolina at Chapel Hill:
Medical Image Analysis, Object-Oriented Data Analysis, Scientific Computing

at New York University:
Computer Vision, Computational Photography, Optimization Methods

from Resources on the Web:
Machine Learning, Convex Optimization, Natural Language Processing

EXTRACURRICULAR ACTIVITIES

Contestant in ACM-ICPC Greater NY: 2011
Developer of one iPhone app on Apple app store in 2010

CERTIFICATIONS

Sun Certified Java Programmer (SCJP), obtained in 2008