David Gong

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EDUCATION

Bachelor of Science in Computer Science at Johns Hopkins University
Advisor: Dr. Michael Dinitz
Graduation Date: December 2016
GPA: 3.88, Science GPA: 4.0

RESEARCH EXPERIENCE

Lab Assistant   Sept 2015–Dec 2016
Integrated Imaging Center, Johns Hopkins University, Baltimore, MD
Lab Director: Dr. Michael McCaffery, Ph.D.
- Prepared samples for electron microscopy on the FEI Tecnai 12.
- Used a Python-based image processing suite (EMAN2) for 3D particle reconstruction.
- Attempted reconstructions of proteins: DnaBC, β-galactosidase, and papillomavirus.

Research Assistant   Jan–Aug 2015
Algorithms and Complexity Group, Johns Hopkins University, Baltimore, MD
Advisor: Dr. Michael Dinitz, Ph.D.
- Explored research in computer science theory, focusing on approximation algorithms, under an REU grant.
- Studied expander graphs, geometric spanners, and spectral graph theory.
- Analyzed the use of greedy algorithms for generating approximate distance oracles.

MEDICALLY RELATED EXPERIENCE

Medical Tutorial Program Participant   Spring 2016
Johns Hopkins Medical Institute, Center for Bariatric Surgery, Baltimore, MD
Dr. Kimberley Steele, M.D., Ph.D.
- Assisted with a study on the effect of warm-up exercises on surgeons' performances.
- Shadowed for 20 hours between observing clinical rounds and bariatric surgeries in the operating room.
- Observed study on surgerical patients' neural responses to different food types.

WORK EXPERIENCE

Software Development Intern   May 2017–*Present*
National Compliance Office, Kaiser Permanente, Oakland, CA
- Used SAP BusinessObjects to Design and implement the the CaseTrack Dashboards, a tool for the chief and regional compliance officers for performance analysis.
- Using SSMS, ASP.NET with C$\sharp$ and Telerik, and HTML/JS/CSS, created a web application, the Pharmacy Drug Loss Report Tool, used for filing and managing cases related to drug loss, waste, and abuse.
- Used Tableau to create the Best Hospitals Dashboard, a tool for visualizing individual hospital compliance performance across the organization.
- Explored data science in Python for the internal, annual Data Science Challenge.

Course Assistant
Department of Computer Science, Johns Hopkins University, Baltimore, MD
600.363/463: Algorithms I   Spring 2015
- Hosted office hours for 2 hours/week.
- Assisted with teaching fundamentals of computer science algorithms and complexity analysis.
- Graded and provided feedback on written assignments and exams.

600.120: Intermediate Programming   Fall 2014
- Hosted office hours for 2 hours/week.
- Assisted with teaching basic principles of programming, C and C++, using the Unix shell, and creating makefiles and shell scripts.
- Graded and provided feedback on coding projects and written assignments.

IT Support   May 2014–Aug 2015
Information Technology, Johns Hopkins University, Baltimore, MD
- Installed and maintained network points across the Johns Hopkins University undergraduate campus.
- Assisted with campus-wide technological support by maintaining and servicing the HP Service Manager ticketing system.

COMMUNITY SERVICE
Elementary School Tutor   Fall 2016
Johns Hopkins Tutorial Project, Baltimore, MD
Center for Social Concern, Johns Hopkins University, Baltimore, MD
- Tutored 1-on-1 with an elementary school student in the basic subjects for 4 hours/week.
- Curated lesson plans using feedback from my organizer.
- Submitted periodic progress reports for the tutee's guardian(s).

Soup Kitchen Volunteer   Summer 2013, Winter 2014
Daily Bread Soup Kitchen, Champaign, IL
- Prepared/served lunches for the underserved members of the local community.
- Assisted with locating accessible resources for basic necessities.

SKILLS
Relevant Lab Courses:

General Biology Lab I, General Biology Lab II, General Physics Lab I, General Physics Lab II, General Chemistry I Lab, Introductory Chem. Laboratory II, Intro Organic Chem Lab

Programming Languages:

C/C++, HTML/JS/CSS, Python, R, Java, PHP/MySQL, $C^\sharp$, Swift, LaTeX

Frameworks & APIs:

Hadoop!, OpenGL, OpenMP, C Spread, ASP.NET

Software Tools & Techniques:

SAP BusinessObjects, SSMS, Telerik, Tableau, Ajax

Foreign Languages:

Proficient Chinese, Intermediate Spanish, Basic German

MISC.
Theatrical Technician   May 2017
Confessions of a Coconut, Johns Hopkins University, Baltimore, MD
- Assisted in the showcase of a research-based one-woman show called as the light board and sound operator.
- Used QLab 4 to program and execute both visual and audio cues.