# 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, $\beta$-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 SMSS, 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**     *Elementary School Tutor*                         Fall 2016
**SERVICE**       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.