Angela Gao

CONTACT
INFORMATION

California Institute of Technology
1200 E. California Blvd
M/C 305-16
Pasadena CA 91104

(609)240-2029
`afgao@caltech.edu`

RESEARCH
INTERESTS

Computational photography and imaging, computer vision, and signal processing– especially applications to perception, inverse problems, and biomedical imaging.

EDUCATION

California Institute of Technology

Ph.D in Computing and Mathematical Science
Advisor: Katherine L. Bouman
Oct 2019 - TBD

Carnegie Mellon University

B.S. in Electrical and Computer Engineering, Additional Major in Biomedical Engineering with University Honors
Aug 2015 - Dec 2018

- GPA: 3.84 (overall), 3.88 (ECE), 3.90 (BME)
- Dean's List: F16, F17, S18, F18

TEACHING
EXPERIENCE

Fall	2018	EXCEL Leader, Signals and Systems
Spring	2018	EXCEL Leader, Signals and Systems
Fall	2017	EXCEL Leader, Mathematical Foundations for Computer Science
Spring	2017	EXCEL Leader, Concepts of Mathematics
Fall	2016	EXCEL Leader, Concepts of Mathematics

HONORS AND
AWARDS

2020	Graduate Research Fellowship Program Honorable Mention National Science Foundation
2019	Graduate Research Fellowship Program Honorable Mention National Science Foundation
2018	Mary Louise Brown Graham Memorial Scholarship Top undergraduate female students in engineering and science Carnegie Mellon University
2018	Grace Hopper Celebration Scholarship Carnegie Mellon University, ECE Department

GRADUATE
COURSEWORK

Analysis and Design of Algorithms	Real Analysis
Image and Video Processing	Linear Analysis
Mathematical Optimization	Machine Learning and Data Mining
Biomedical Optics	Networks: Structure and Economics

UNDERGRADUATE
COURSEWORK

Introduction to Computer Systems	Introduction to Probability Theory
Design of Digital Systems	Principles of Imperative Computation
Fundamentals of DSP	Computer Security and Cryptography
Discrete Mathematics	Electronic Devices and Analog Circuits

RESEARCH EXPERIENCE	2019	AI powered Inline Cardiac Strain Mapping in Gadgetron on MR scanners
		    Advisor: P. Kellman and H. Xue,
		    National Heart, Blood, and Lung Institute,
		    National Institutes of Health.

	2018–2019	Single Shot Illumination Source Separation
		    Advisor: A. Sankaranarayanan,
		    Department of Electrical and Computer Engineering,
		    Carnegie Mellon University.

	2018	Social Network Effects on Growth and Development of Adolescents
		    Advisor: E. Celis,
		    School of Computer and Communication Science,
		    École Polytechnique Fédérale de Lausanne.

	2017–2018	Literature Review of Computational Photography and Approaches to Understand Materials Using Direct and Global Light
		    Advisor: A. Sankaranarayanan,
		    Department of Electrical and Computer Engineering,
		    Carnegie Mellon University.

	2017	Decoding Audio of Sonorines using 3D Reconstruction
		    Advisor: A. Finklestein and S. Rusinkiewicz,
		    Department of Computer Science,
		    Princeton University.

WORKSHOPS	2019	KISS Study on "Beyond Interstellar: Extracting Science from Black Hole Images" Pasadena, CA.
INDUSTRY EXPERIENCE	2016	Software Engineering Intern. Morsel, New York, New York.

PROJECTS	2018	Baby Got Track
		    ECE Capstone Design Project,
		    Carnegie Mellon University.

	2017–2018	Medtronic Positional Stabilizer for Image Guidance Trackers Used in Spinal Procedures
		    Biomedical Engineering Senior Project,
		    Carnegie Mellon University, Medtronic Inc.

	2015	Term Project: Outfit Generator
		    Fundamentals of Programming and Computer Science,
		    Carnegie Mellon University

ACADEMIC SERVICE	2016–2019	Biomedical Engineering Society
		    President (2018-2019),
		    Social Chair (2017-2018),
		    Assistant Social Chair (2016-2017),
		    Carnegie Mellon University

MEMBERSHIP	Spring 2019	Phi Kappa Phi
	Fall 2018	Tau Beta Pi
	Spring 2018	Eta Kappa Nu
	Spring 2018	Mortar Board
	Fall 2016	Alpha Phi Omega
		Carnegie Mellon University

ADDITIONAL INFORMATION	2018–2019	Student Supervisor

Academic Development,
Carnegie Mellon University
- Mentored other EXCEL/SI leaders
- Helped with different administrative tasks

2016–2019   EXCEL Leader

Academic Development,
Carnegie Mellon University
- Instructed students in proof based courses through collaborative learning environments
- Designed and implemented lesson plans presented similar to lectures and recitation

2016-2019   Alpha Phi Omega

Brother Development Chair (S18),
Pledge Class Fellowship Vice President (F16),
Carnegie Mellon University.
- Organized networking events between alumni and members
- Planned panels and speakers for professional development
- Performed over 250 hours of service

2015-2017   Club Ski and Snowboard Team

Carnegie Mellon University.

RELEVANT SKILLS	Programming Languages:	Python, C, x86-64, System Verilog, Matlab, LaTeX, Java
	Software and Tools:	MySQL, PyTorch, OpenCV
	Spoken Languages:	English, Chinese, Spanish