ANDREW XIA

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EDUCATION

Massachusetts Institute of Technology · *Cambridge, MA*   *Expected Dec. 2018*
Candidate for M.Eng in Computer Science · GPA: 5.0/5.0

Massachusetts Institute of Technology · *Cambridge, MA*   June 2017
Bachelor of Science in Mathematics and Electrical Engineering & Computer Science (18, 6-2)· GPA: 4.6/5.0

Selected Coursework: Applied Discrete Math, Modern Algebra, Real Analysis, Numerical Methods, Probability Theory, Logic, Algorithms I, II & III, Computer Architecture I & II, Microcomputer Project Laboratory, Machine Learning, Distributed Systems, Network Security, Bayesian Inference

SELECTED WORK EXPERIENCE

Facebook · *Software Engineering Intern* · *Menlo Park, CA*   Fall 2017
· Worked on Facebook Android English-Hindi Transliteration keyboard, including UI work, database, client-server interaction
· Designed & implemented next word prediction, trained sequence-to-sequence RNNs w/ LSTMs to improve transliteration
· Proactively reached out to messenger team, added ability to mention people in group conversations by nickname.

Morgan Stanley · *Quantitative Finance Intern* · *New York, NY*   Summer 2016
· Developed SPG fundamentals page for Securitized Products Group, a web based framework to integrate group's data sources for intuitive cross-desk data comparison and modeling
· Wrote back end database connections in Q and front end in AngularJS, SCSS and Highcharts API

Pupil Labs · *Software Engineering Intern* · *Berlin, Germany*   Summer 2015
· Worked on open-source code, implemented a 3D eye tracking algorithm using ellipse backprojection to improve pupil detection.
· Assisted assembly of pupil headsets, helped develop new website. Part of MIT MISTI-Germany Program

PROJECTS & RESEARCH

Threshold Multi-Key Fully Homomorphic Encryption· *Cambridge, MA*   Jan 2018 - Dec 2018
· Research as part of M.Eng project in theoretical computer science, advised by Yael Kalai
· Devised new round-optimal Multi Party Computation protocol via FHE and LWE assumptions

Leakage Resistant Public Key Authentication for Embedded Devices· *Cambridge, MA*   Sept 2016 - June 2017
· Implemented pairings-based authentication scheme in C & Python for Elliptic Curve Hardware Accelerator. Optimized code by reducing memory consumption through stack-based bigInt library. Advised by Anantha Chandrakasan. *Paper to Appear*

3D Tic Tac Toe AI on 8051 & PSoC · *Cambridge, MA*   May 2016
· For 6.115 Microcomputer Project Lab final project, implemented 3D Tic Tac Toe game with AI in C & Assembly, with capacitative based sensing user control and a VGA display for game display. (Video link)

SELECTED AWARDS

· **2018-2019 Fulbright Chile Scholar**   *Apr. 2018*
· **DEFCON CTF Qualifier**   *July 2017*
· **MITRE Research and Innovation Scholar**   *Sept. 2016 - Jun. 2017*
· **HackMIT SailThru Prize**   *Oct. 2014*

ACTIVITIES AND LEADERSHIP

· **MIT 2017 Alumni Council** Webmaster   *2017 - pres.*
· **MIT Technique** (yearbook club) Living Groups Photo Editor   *2016 - pres.*
· **Amphibious Achievement** Director of Program Evaluation, Swim Coach, Academic Mentor   *2013 - 2017*

SKILLS AND INTERESTS

Computer Languages	Python, Java, HTML/CSS, JavaScript, Matlab, Assembly, C, Q
Human Languages	fluent in English & Chinese; conversational in German & Japanese
Interests & Hobbies	Planespotting, Skiing, Photography, YouTube, Writing, Living Abroad