Souvik Banerjee

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Education

University of Texas at Austin   *GPA: 3.98*
B.S. Computer Science Honors, Mathematics   May 2019
- **Turing Scholar and Dean's Scholar**
- **Distinguished College Scholar, University Honors**

Colleyville Heritage High School
Valedictorian, National Merit Scholar   May 2015

Experience

Point72: Cubist Systematic Strategies   *New York, NY*
Research Analyst Intern: FX Options Trading   Dec 2018
- Improved automated trading systems by using Python and the FIX protocol to parallelize quote requests.

Citadel Securities   *Chicago, IL*
Software Engineer Intern: Low Latency   Sep 2018 - Nov 2018
- Created a developer tool for analyzing and visualizing compiler optimizations to improve performance of trading systems.
- Created a C++ library for analyzing cache misses using Intel CPU performance counters and DWARF debug information.
- Used C++, JavaScript, React, Python.

Apple   *Cupertino, CA*
Software Engineer Intern: Core Kernel   May 2018 - Aug 2018
- Implemented a new randomized thread scheduling policy in the XNU kernel to find concurrency bugs in macOS, iOS, tvOS, and watchOS.
- Led project design meetings and presented work to senior management.
- Used C, Python, and x86 and ARM assembly.

Facebook   *Menlo Park, CA*
Software Engineer Intern: WhatsApp iPhone   May 2017 - Aug 2017
- Added a new feature to notify contacts when a user changes their phone number on WhatsApp.
- Added a new feature allowing users to switch between voice and video calls.
- Used Objective C and Swift.

Facebook   *Mountain View, CA*
Software Engineer Intern: WhatsApp VoIP   May 2016 - Aug 2016
- Improved reliability and deployment speed for WhatsApp's VoIP relay server, reducing upgrade times by 99%.
- Used C++ and Python.

University of Texas at Austin   *Austin, TX*
Undergraduate Researcher   Aug 2017 - Present
- Wrote custom benchmarks and kernel tracing tools in C and Rust to investigate I/O performance of several popular Linux filesystems.

University of Texas at Austin   *Austin, TX*
Teaching Assistant   Aug 2016 - Dec 2017
- Taught CS 439H Operating Systems Honors, CS 429H Computer Architecture Honors, CS 311 Discrete Mathematics.

Skills & Coursework

Languages & Frameworks   Java, Rust, Python, C, Objective C, x86 assembly, C++, Swift, React

CS Courses   Computer Graphics, Artificial Intelligence, Computer Vision, Algorithms, Operating Systems, Programming Languages, Computer Architecture, Data Structures