

# Raayan Pillai

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CONTACT INFORMATION	raayan@raayanpillai.com github.com/raayanpillai	raayan.net
PROFESSIONAL EXPERIENCE	<p><b>Virtu Financial</b>, New York, NY <i>Trader</i> <span style="float: right;"><b>Apr 2021 – present</b></span></p> <p><b>Gemini</b>, New York, NY <i>Software Engineer</i> <span style="float: right;"><b>Oct 2019 – Mar 2021</b></span> Developed and maintained systems that service millions of retail exchange users. Built event introspection tools to monitor, detect, and prevent fraudulent and nefarious behavior on exchange. Architected a peer-to-peer KYC system that allows exchanges to fulfill regulatory obligations. Optimized database structures and queries throughout product offerings. Built out caching layers and practiced performance oriented programming to meet the exchange's growing volume. Utilized JVM thread and memory analytics to further improve code. (Scala, PostgreSQL, JVM, Performance)</p> <p><b>Goldman Sachs</b>, New York, NY <i>Software Engineer</i> <span style="float: right;"><b>Jul 2018 – Oct 2019</b></span> Engineer for the Investment Banking Division. Architected and deployed a micro-service that consolidated the debt and equity capital market teams' external settlement processes. Worked with a group of peer firms to enable direct communication between capital market participants. Implemented and deployed a FIX client that enabled our participation in the consortium. Overhauled the test development process by providing a framework for devs to more accurately simulate business workflows. (Java, JMS, Spring, Hibernate, FIX, QuickFIX)</p> <p><i>Intern</i> <span style="float: right;"><b>May 2017 – Aug 2017</b></span> Replaced a monthly private wealth management performance report, requiring 4-5 hours of manual calculation, with a live dashboard. Achieved by integrating lending (mortgage and loan) data and relevant key-performance-indicators into web dashboards. Deployed processes to flatten and join from multiple data sources in the firm's proprietary language. (SQL, Process Management)</p> <p><b>FINRA</b>, Rockville, MD</p> <p><i>Intern</i> <span style="float: right;"><b>May 2016 – Aug 2016</b></span> Implemented fuzzy string matching algorithms to reduce errors by giving context to data ingested from physical mediums. (OCR Systems) Deployed a web-service using this system and geocoding APIs, that enabled employees to correct their bespoke data. (Python, REST)</p>	
INDEPENDENT PROJECTS	<p><b>lockbook</b>, New York, NY <span style="float: right;"><b>June 2019 – present</b></span> <i>Secure, Version-Controlled Journaling</i> A security-first, cross-platform, markdown-friendly journaling application. Lockbook employs industry-standard encryption (transparently implemented in our open-source codebase) to secure a user's data before committing to the git repository of their choosing. (Rust, Cryptography, Swift, PostgreSQL)</p> <p><b>redcloud</b>, Rochester, NY <span style="float: right;"><b>Feb 2017 – May 2018</b></span> <i>Inter-Exchange Arbitrage Engine</i> Implemented an arbitrage trading bot which analyzed real time market data from various cryptocurrency exchanges to find arbitrage opportunities between them. Maintained network statistics and a local order-book to reduce risk related to exchange stability. (Java, C++, WebSockets)</p> <p><b>overseer</b>, New York, NY <span style="float: right;"><b>Jan 2017 – present</b></span> <i>Hour Management and Synthesis</i> Platform for collecting, manipulating, and deriving useful analytics from focused, hourly recordings. Encourages mindfulness by employing various data-science libraries to predict future behavior and recognize patterns. (Python, Machine-Learning)</p>	
EDUCATION	<p><b>University of Rochester</b>, Rochester, NY <span style="float: right;"><b>Sep 2014 – May 2018</b></span> <i>B.S., Computer Science</i></p>	
TOOLS	<p><i>Proficiency:</i> Rust, Python, Scala, Swift, SQL <i>Familiarity:</i> Java, C/C++, CUDA <i>Technologies:</i> PostgreSQL, Pulsar, Bazel, FIX, UNIX, Docker</p>	