



ANSH NAGWEKAR

✉ nagwekar@upenn.edu  [ansh-nagwekar](https://www.linkedin.com/in/ansh-nagwekar)  [anshnagwekar](https://github.com/anshnagwekar)

University of Pennsylvania

2021 - Present

Bachelor of Engineering, *Computer Science & Network Theory (minors in Mathematics + Statistics)*

Key Courses: Data Structures & Algorithms (TA), Network Theory (TA), Scalable Cloud Computing, Optimization (TA), Advanced Algorithms, Applied Probability Models, Bayesian Methods, Operating Systems, Stochastic Processes*.

Master of Engineering, *Computer and Information Science*

Key Courses: Statistics for Data Science, Machine Learning Theory, Ethical Algorithm Design, Convex Optimization, Financial Engineering, Deep Learning*, Computational Learning Theory*, LLM Engineering*, Uncertainty Estimation*.

Professional Experience

Susquehanna International Group, *Quantitative Developer Intern*

Jun 2024 - Aug 2024

TECH Python, RipTable, Jupyter, GitLab, TypeScript, Airflow, gRPC

- ❖ Worked in *Strategic Options Trading* specialized pod for platform and strategy development in systematic trading.
- ❖ Implemented harness app to gracefully support intraday strategy changes with versioning, autofill, and validation.
- ❖ Collaborated with market-making group to compute and deliver live data feeds for volatility surface modeling.
- ❖ Performed statistical analysis to predict the health of critical feeds by trading open and set up monitoring tools.

Ion Protocol, *Blockchain Research Engineer*

Sep 2023 - Mar 2024

TECH Go, Solidity, Rust, PostgreSQL, Azure, Grafana, JSON-RPC

- ❖ Engineered gas-optimized smart contracts to power DeFi products (e.g., lending markets, yield oracles) for LSTs.
- ❖ Assembled zero-knowledge verification tools for proof-of-reserve by investigating Ethereum storage layout rules.
- ❖ Led data engineering efforts for protocol surveillance system to verify financial invariants, monitor AMM (automated market-maker) liquidity pools, and systematically adjust parameters to maintain protocol solvency.
- ❖ Designed performant (<5ms) Rust bot under Artemis framework that runs swap simulations and fires automated arbitrage strategies on live AMM activity in order to prevent counterparties from draining Ethereum liquidity.

Tesla, *Software Engineer Intern*

May 2023 - Aug 2023

TECH Python, MySQL, Redis, Docker, Jenkins, Kubernetes, Splunk, Elasticsearch

- ❖ Worked under *Applications Engineering* team to build and monitor services that handle pricing and configuration of Tesla products in 42+ global markets. Collaborated with DevOps team to conduct performance testing.
- ❖ Reduced response times for production APIs by ~40% by implementing Celery tasks and robust error handling.
- ❖ Integrated pricing contexts for Tesla Insurance into used-car valuation service and wrote scalable algorithms to extract cheapest vehicle comps to reduce fees to third-party vendors (estimated annual impact of \$6M).

VO2 Fans, *Founding Software Engineer*

May 2022 - Nov 2022

TECH JavaScript, MERN, AWS, ThirdWeb SDK

- ❖ Harnessed web3 technology and "engage-to-earn" model to improve sports fan engagement by enabling fans to become stakeholders in their favorite athletes (raised \$350K in pre-seed, **Techstars '22** Sports Accelerator)
- ❖ Built and designed backend stack and shipped software features relating to securing APIs, handling crypto transactions, and developing reward mechanisms for core platform (5000+ monthly visits).

Research and Part-Time Experience

Open Core Ventures, *Open-Source Investment Research*

Jul 2022 - Present

- ❖ Conduct technical due diligence and market research on 200+ open-source software projects across various industries (e.g., DevOps, gaming, GenAI). Advised \$2M seed investments such as DeepMake, Kedify, Phaser.
- ❖ Implemented various software and automation tools to reduce backlog in the investment research pipeline by 33%.

Penn Labs, *Software Backend Engineer*

Feb 2022 - Jan 2024

- ❖ Co-managed 20,000+ LoC codebase (Python Django, PostgreSQL) and interface with front-end engineers to handle exceptions and create RESTful APIs. Community software products used daily by 12,000+ Penn students.
- ❖ Implemented schedule-sharing feature on Penn Course Plan which involved significant backend design changes.

Newristics LLC, *Natural Language Processing Research*

Jun 2020 - Jul 2021

- ❖ Researched applied NLP for various internal projects for behavioral economics-based marketing firm.
- ❖ Leveraged ML techniques (regression, deep learning, ensemble learning) to identify 40+ applied heuristics in marketing messages. Achieved accuracy of 85%+ over all models (currently used in production).

Skills and Interests

PLs/Libraries: Python (pandas, sklearn, torch, tensorflow), JavaScript, Go, Java, C, OCaml, Bash, SQL, Solidity, Rust

Research Interests: optimization theory, DeFi, NLP, statistical learning theory, blockchain infrastructure, open-source

Hobbies: tricking, educational outreach, street dance, game theory, San Francisco 49ers, chocolate milk, canoeing, poker