



ANSH NAGWEKAR

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Education

University of Pennsylvania, Philadelphia, PA

Aug 2021 - Present

Candidate for B.S.E. in Computer Science (NETS), Minor in Mathematics & Statistics

GPA: 3.95/4

Relevant Coursework: Data Structures and Algorithms (TA), Network Theory (TA), Scalable and Cloud Computing, Optimization Theory (TA), Foundations of Data Science, Advanced Algorithms, Machine Learning Theory (G), Ethical Algorithms (G), Applied Probability Models in Marketing (G). *G = Graduate Level, *TA = Teaching Assistant

Professional Experience

Ion Protocol, Blockchain Researcher and Software Engineer

Sep 2023 - Present

- **Tech Stack:** Go, Solidity, Typescript, PostgreSQL, Azure, Ethereum JSON-RPC, Grafana.
- 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 automated market-maker liquidity pools, and algorithmically adjust system parameters to maintain protocol solvency.

Tesla, Software Engineer Intern

May 2023 - Aug 2023

- **Tech Stack:** Python, MySQL, Redis, Docker, Jenkins, Kubernetes, Splunk, Elasticsearch API.
- 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 async 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 Stack:** MERN, Javascript, 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, fielded seed offers at **\$10M** valuation).
- 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).
- Attended 2022 Techstars Sports Accelerator and learned about the fundamentals of entrepreneurship, scaling a pre-seed startup, and pitching to venture capital firms and investors while networking with Techstars alumni.

Projects and Research Experience

Open Core Ventures, Open-Source Development Research

Jul 2022 – Present

- Perform due diligence on **70+** open-source software projects by conducting a technical analysis of the codebase, researching business models of commercial competitors, and aggregating contribution analytics.
- Collaborate with managing partners (including Sid Sijbrandij) to inform seed-stage investment decisions of **\$2M**.

Penn Labs, Software Backend Engineer

Feb 2022 – Present

- Engineer RESTful APIs to optimize query performance for software products used by **12,000+** Penn students.
- Co-manage **20,000+** LoC codebase (Python Django, PostgreSQL) and interface with front-end engineers to handle exceptions and create resilient endpoints. Service production pipeline (Docker, Github Actions) to ensure CI/CD.
- 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).
- Compiled comprehensive research report on NLG text style transfer using large language models (LLMs) to assist the firm in determining necessary software to automate Aigile (industry-leading message optimization service).

Skills and Interests

Languages: Java, Python (pandas, nltk, sklearn, torch, tensorflow), JavaScript, C, OCaml, Bash, SQL, Go, Solidity

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

Activities & Societies: Penn Social Entrepreneurship Movement, Venture Lab (Wharton VIP Fellowship), Paragon National Group (Quant Analyst), Greylock Techfair 2023, Penn Dhamaka Dance Troupe

Hobbies: tricking (flips), educational outreach, fusion dance, San Francisco 49ers, chocolate milk, game theory, poker