Justin Reed

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Education

University of Pennsylvania, MSE in Computer Science Jan 2024 – May 2026

- GPA: 3.43
- **Coursework:** Operating Systems, Networked Systems, Databases, Applied Machine Learning, Probability, Convex Optimization, Computer Graphics, Computer Organization and Design

Haverford College, BS in Computer Science, Minors in Chinese and Economics Sept 2020 – May 2024

- GPA: 3.73
- **Coursework:** Data Structures, Concurrency, Data Science, Speech Synthesis, Economic Statistics, Intermediate Microeconomic Analysis, Intermediate Macroeoconomics, Money and Banking, Linear Algebra

Experience

Biometrics Intern (Statistical Programming), Corcept – Redwood City, CA June 2025 – Present

- Developed software tool in R for filtering and improving readability of Pinnacle 21 validator reports
- Constructed an extended logistic model in R and Excel to forecast revenue of hypothetical drug launch
- Designed dashboard for visualizing data of ongoing clinical study using R Shiny

Incubator Grantee, Haverford Innovation Program – Haverford, PA May 2024 – Aug 2024

- Ideated, developed, tested, and presented event and friend-finder app "BuddyUp"
- Implemented real-time chat and user authentication, integrating with backend database
- Awarded $14,000 grant from Haverford and $5,500 grant from Pennovations

Teaching Assistant, Microeconomic Analysis; Theory of Comp. – Haverford, PA Jan 2023 – May 2024

- Tutored 60 students in writing, debugging, and optimizing Python scripts with NumPy, pandas, matplotlib

Projects

UNIX-Like Operating System Simulation (Course Project – Operating Systems) Apr 2025 - May 2025

- Independently designed and implemented a FAT-style file system in C
- Tools used: C, Git

Chord Application and LS Routing Protocol (Course Project - Networked Systems) Feb 2025 - Apr 2025

- Implemented Chord: a distributed hash table with efficient key-based routing
- Developed and tested LS routing protocol for dynamic shortest-path computation
- Tools used: C++, Ns-3, Git

Neural Network for Chinese Pinyin to Hanzi Translation (Course Project - ML) Apr 2024 - May 2024

- Designed Seq-to-Seq NN that translates sentences from >1522 possible pinyin to >100k possible characters
- Tools Used: Python, Pytorch

Housing Market Modeling Nov 2021 - Dec 2021

- Simulated microeconomic housing market in Python, estimating prices based on location, income, and policy
- Tools Used: Python, Numpy, Pandas, Matplotlib

Skills

Software Engineering: C++, C, Java, C#, NS-3, OpenGL, JavaScript, Node.js
Data Science: Python, R, PyTorch, Pandas, SQL, MongoDB, Neo4j
Tools: Git, Docker, AWS, VSCode, Datagrip, Linux, RStudio
Other: Mandarin Chinese (Proficient), Photoshop, Premiere Pro