Jonathan Moon

2 Craig Drive, Hillsborough, New Jersey | 609-613-6002 | moonjonathans@gmail.com | github.com/jonathan-moon

Education

- **UNIVERSITY OF PENNSYLVANIA**, Philadelphia, Pennsylvania   **2023-2026**
  - Computer and Information Science Accelerated Master's Engineering program at Penn Engineering

  Relevant Coursework: Introduction to Networks and Protocols (4.0), Software Systems
- **HAVERFORD COLLEGE**, Ardmore, Pennsylvania   **2021-2025**
  - Computer Science Major
  - GPA/Major GPA: 3.89/3.96
  - Starter on Haverford Men's Varsity Lacrosse Team

  Relevant Coursework: Introduction to Computer Science, Introduction to Data Structures, Introduction to Computing, Calculus II, Discrete Mathematics, Principles of Computing Systems, Data Science, Machine Learning, Analysis of Algorithms, Compiler Design

Skills

- Proficient coding ability in: Java, Python, C/C++, TypeScript, JavaScript, HTML/CSS, LaTeX, UNIX, R
- Frameworks: React, React Native, Firebase, Pandas, NumPy
- Integrated development environments used: IntelliJ, CLion, PyCharm
- Supportive and constructive in a group environment
- Excellent problem solving skills

Projects

- **AthLink: Network & Job Finder**
  - Lead a team of 3 to develop an iOS social networking app using TypeScript, React Native, Expo, and Google Firebase over the course of several months. Currently adding features with monthly updates.
- **Personal Website: jonathan-moon.github.io (**Independent, HTML/CSS)
  - Developed a personal website to display personal achievements as well as coding ability in various website development languages and frameworks.
- **Compiler for Tiger** (CS350, C/C++)
  - Built a compiler for the Tiger language targeting HERA (Haverford-specific machine language). Implemented each stage of the compiler, including lexical scanning, semantic analysis, and code generation, from scratch. Utilized Sethi-Ullman register allocation with stack usage. The compiler supported variable and function declarations, type definitions, C-style comments, if/then/else, for and while expressions, operations, comparisons, all with type-checking
- **Predicting House Pricing with Linear Regression and Adaboost** (CS360, Python)
  - Implemented and evaluated Linear Regression and Adaboost learning models in predicting housing prices in the Boston area based on features regarding each property. Developed a report comparing the accuracy of each model as well as the weight of each feature in determining price of a given property.
- **Big-Int Data Type** (CS251, C++)
  - Created a numeric data type designed to store large values. Consists of an array that holds 3 digits per index as well as a size attribute which stores the length of the array. Created various methods (i.e. constructors, destructor, toString(), extend(), etc.) and operators (+, =, +=) which require the use of pointers, addresses, memory allocation and deletion, overflow, and other concepts regarding memory.

Work Experience

- **Co-Founder, Developer | AthLink**   **August 2023-Present**
  - Co-founded a networking platform for current and former student athletes- guiding the company's technological direction and ensuring alignment with business objectives
  - Oversee and participate in the development process with a team of 3, conceptualizing and developing full-stack structure
  - Over 150 users within first 2 weeks of release
- **Coach | 2 Knights Lacrosse**   **May-August 2021 to 2024**
  - Mentored and coached over 100 elementary and middle school players with an emphasis on building character
  - Established weekly practice plans, schedules, offensive/defensive schemes for three teams
  - Aided in improving the 2028 team national ranking from over #250 to #121 in 2023
- **Co-Founder | Landscaping, Moving, & More**   **2019-Present**
  - Co-Founded a small business that handled manual labor jobs for over 100 local families
  - Managed accounting, scheduling, logistic and financial responsibilities

Additional Information

- High School Athletics: 4 Year Varsity Starter Men's Lacrosse (2x Captain), 6 years of competitive club lacrosse
- Member of HaverCode: A club that holds workshops to refine CS skills and propose changes to the department at Haverford