

# Spencer Ye

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## EDUCATION

### Johns Hopkins University | 4.0/4.0 GPA

May 2027; Baltimore, MD

- Bachelor of Science in Computer Science, minor in Applied Math, Entrepreneurship
- 2x Dean's List

### Homestead HS | 4.0/4.0 GPA

June 2023; Cupertino, CA

- Valedictorian, Student-Athlete of the Year, 4-Season Track & Cross Country Captain

## TECHNICAL SKILLS

**Languages** | C / C++ (Win32, POSIX), Python (PyTesseract, OpenCV, SKLearn, Pillow, Selenium), JavaScript (React, JQuery), HTML / CSS, SQL (BigQuery), R, Java

**Softwares** | Git, VS Code, Excel, Tableau, DaVinci Resolve, OBS Studio

**Coursework** | Computer Systems, Data Structures, Concurrency for Data Science, Functional Programming, Full-Stack JavaScript; Linear Algebra, Multivariable Calculus, Discrete Math; Leadership Theory, Professional Communication; Google Data Analytics

## WORK EXPERIENCE

### Piotech Inc. | Software Engineering Intern

July 2024 - August 2024, Shenyang, PRC

*Team: Software Testing – Quality-assurance of operational software for Semiconductor FAB equipment*

- Conducted thorough code reviews (in C) & proposed optimizations with an 18% decrease in run time while meeting specifications
- Executed RM-KI testing, including designing tests and analyzing 6 rounds of result data, to validate product reliability
- Collaborated closely across engineering teams to increase accuracy and clarity of technical presentations, improving communication of complex concepts to a panel of ~20 international experts & PRC officials

### Kalea Studio | Founding Engineer

August 2023 - Present, Remote

*Description: UX-focused clothing firm targeting gen-z and millennial-aged young professionals*

- Crafted e-commerce website with HTML, CSS, and JavaScript, incorporating templates from Shopify
- Assessed visitor data with Numpy, R, and Tableau, prompting website updates leading to a near 50% increase in return customers
- Developed and refined company vision, strategically recruited co-founders, and nurtured a collaborative work culture. Pitched to investors, securing \$3,000 in funding, orchestrated and executed project timelines

### ASDRP | Student Researcher

March 2022 - June 2023, Fremont, CA

*Team: Machine Learning for Drug Discovery – ML algorithms utilization to bolster exploration of new candidate medications*

- Visualized raw data/processing/results with Matplotlib for stakeholders and a coauthored preprint paper with 250+ downloads
- Implemented Logistic Regression and Random Forest with Pandas and SKLearn, trained ML Model with PaDEL Descriptors to categorize molecules as either natural or synthetic, determined significance of each feature with SHAP values

## PERSONAL PROJECTS

### Windows Motivational Background: Script that generates motivational images and sets as screen backgrounds

- Integrated Windows Task Scheduler to automate background switches using user log-in as a trigger with C++ windows.h library
- Designed ideal background template, employed PIL to create and store images based on user input

### 24 Game Solver: Python bot that plays '24' in online game rooms & proves what percentage of playing hands are solvable

- Connected to and scraped website with Selenium, interpreted screen with OpenCV, controlled computer inputs with Pyautogui
- Developed an algorithm to categorize each playing hand as solvable or unsolvable with a 99.7% accuracy
- Attained the high score (45k) on the July 2024 leaderboard on 4nums.com in one attempt while avoiding anti-bot countermeasures

### California HS Rankings: Data project that ranks Californian high schools & decides what factors are integral to success

- Produced an intuitive algorithm based on statewide standardized tests to score all 1,556 standard schools
- Utilized machine learning with SKLearn to analyze data and determine what factors are most correlated with school success
- Sorted, filtered, and combined datasets from the California Department of Education with BigQuery, Excel, and SQL

## OTHER INVOLVEMENT / EXTRACURRICULAR

- Varsity Track & Field: USTFCCCA All-Region, All-Conference Second-Team
- Software Engineering Club Executive Board | A Place to Listen Member | Improv Comedy Club Member