# 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; minors in Applied Math, Space Engineering
- 2x Dean's List

**Homestead High School |** 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, GDB), Python (PyTesseract, OpenCV, SKLearn, Pillow, Selenium, Pyautogui), JavaScript / TypeScript (React, JQuery), HTML / CSS (Bootstrap), SQL (BigQuery), R, Java, OCaml (Core)
**Softwares** | Git, VS Code, Excel, Tableau, DaVinci Resolve, OBS Studio, Microsoft Office, Linux (Ubuntu), Jupyter Notebook, npm
**Coursework** | Computer Systems Fundamentals, Data Structures, Parallel Computing for Data Science, Functional Programing, Full-Stack JavaScript; Leadership Theory, Professional Communication; Google Data Analytics Certificate; Multivariable Calculus, Linear Algebra, Discrete Math

## WORK EXPERIENCE

**Piotech Inc. |** Software Engineering Intern                    July 2024 - August 2024, Shenyang, Liaoning
*Team: Software Testing – Quality-assurance of operational software for Semiconductor FAB equipment*
- Conducted code reviews in C & C++ using gdb, proposed optimizations that led to 18% faster storage of operational data
- Executed I/O testing to validate product reliability; designed tests using Python, analyzed result data,
- Collaborated with two engineering teams to increase the accuracy and clarity of technical presentations that were pitched to a panel of 24 international experts and local government officials

**Kalea Studio |** Founding Engineer                    June 2023 - Present, Remote
*Description: User-centric clothing firm targeting gen-z and millennial-aged young professionals*
- Crafted e-commerce website using HTML, CSS, and JavaScript, incorporated template libraries
- Analyzed visitor data with Numpy and Tableau, prompting website updates leading to a ~50% increase in return customers
- Created and refined company vision, recruited 2 co-founders, nurtured a collaborative work culture. Pitched to investors, securing $3,000 in funding, orchestrated and executed fast-paced 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 and results with Matplotlib for stakeholders and a preprint paper with 250+ downloads
- Implemented Logistic Regression and Random Forest with Pandas and SKLearn, trained with PaDEL Descriptors to categorize molecules as either natural or synthetic, determined significance of each feature with SHAP values

## PROJECTS

**Charity Search Engine:** *Donation social media site that streamlines the donation process*
- Integrated RESTful APIs with JavaScript to collect and process charity information, connected to MongoDB
- Won "Best New Venture Hack" out of 200+ participants at HopHacks 2024

**Windows Motivational Backgrounds:** *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++ win.h library
- Designed background template that drains battery 5 times less than Windows default, employed PIL to create images

**24 Game Solver:** *Python bot that plays '24' in online game rooms & proves what % of playing hands are solvable*
- Used Selenium to connect and scrape site, 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
- Won first place on the July 2024 leaderboard on 4nums.com, avoided all anti-bot countermeasures

## EXTRACURRICULAR / OTHER INVOLVEMENT

- Varsity Track & Field: USTFCCCA All-Region, All-Conference Second-Team, dedicated 30+ hrs/week to performance
- Association of Computing Machinery Executive Board