P A T R I C K   K I R A N   H O E Y

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EDUCATION

Northwestern University – *Evanston, IL*   *September 2020 - June 2024 (expected)*
Bachelor of Science – **Computer Science** | Minor in **Data Science and Engineering** | Theme in **Psychology**
GPA: 3.91/4.00 | McCormick Honors List 6/6 Quarters, 2x McCormick High Honors List
Relevant coursework: Data Structures and Algorithms, Machine Learning, Operating Systems, Foundations of Data Science, Human-Computer Interaction, AI and Experimental Narrative, Statistics for Engineers, Economics for Engineers
Extracurricular activities: Executive Officer of Technology for Northwestern Associated Student Government (ASG), Design and Innovate for Social Change (DISC)

Lick-Wilmerding High School – *San Francisco, CA*   *August 2016 - June 2020*
GPA: 3.98/4.00 | **SAT:** 1520/1600 | **SAT Subject Test - Math II:** 800/800
Extracurricular activities: Varsity baseball (team captain), cross county (team captain), writer for school newspaper, tutor

PROFESSIONAL EXPERIENCE

Sutro Biopharma – *South San Francisco, CA*
Software Engineering Intern   *June 2022 - September 2022*
- Independently developed applications to improve company productivity using Python/Flask, JavaScript, HTML, and SQL
    1. **Upstream Reagent Portal**: allows Sutro's scientists to enter data more conveniently (features include auto-fill based on process version, file upload to input data, auto-calculation of data), includes intuitive visualization of DB
    2. **RODI Data Tracker**: allows Sutro's Facilities team to enter water filtration data via a mobile device, sort/filter database directly from the app, export any subset of database to Excel, and chart data from any given time frame
- Created basic Flask template & wrote documentation, making it easier for Sutro to build other helpful apps in the future
- Met regularly with users of my applications to perform user testing, get feedback, and take requests for new features

Code for fun – *Sunnyvale, CA*
Lead Computer Science Instructor   *May 2021 - August 2021*
- Taught students (ages 9-15) at Code for fun (nonprofit computer science school for Bay Area kids), led instruction for 3 classes: Python Programming, Mobile App Development, and Web Design
- Helped students complete coding challenges and create personal apps, websites, and programs
- Communicated with parents to discuss their child's progress, explain topics/skills covered in class, and address concerns
- Trained and mentored high school volunteers who assisted me in running my classes

Experimental Continuum Mechanics Lab, ETH Zurich – *Zurich, Switzerland*
Summer Research Intern   *July 2019*
- Completed summer research project on the *Nimble*, a device invented by ETH Zurich's Experimental Continuum Mechanics Lab that analyzes the biomechanical properties of soft tissues for disease diagnosis
- Manufactured silicone phantoms for the verification of their biomechanical properties using the *Nimble*
- Wrote Python scripts for data processing, analysis, and visualization (used NumPy and Matplotlib)
- Documented my work in a written report and presented my findings to post-doctoral fellows and graduate students

PROJECTS

Executive Officer of Technology, Associated Student Government (ASG) – *Evanston, IL*   *September 2022 - Present*
- Currently developing The Personnel Accountability Tracker (PAT) (https://github.com/patrickhoey20/asg-pat): allows ASG Senators to log weekly progress, lets ASG Cabinet search data by senator and analyze government-wide metrics

Design and Innovate for Social Change (DISC) Project – *Evanston, IL*   *January 2022 - Present*
- Building online case management system for Good News Partners (Chicago homeless shelter) with a team of 6 students
- My work so far: built intake forms (using React and Semantic UI), designed DB tables (using MySQL) for intake forms

SKILLS AND INTERESTS

Technical Skills: *Proficient*: Python, HTML, CSS, JavaScript, SQL, MATLAB, Git; *Intermediate*: Bash, C, C++, C#, Tableau
Technical Interests: full-stack SWE, human-computer interaction, UI/UX design, data science & ML, database systems
Personal Interests: running, biking, woodworking, San Francisco sports teams, journalism, teaching/tutoring kids, piano