**Zeyn Schweyk**

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Piano Duo: [thepianoboys.com](https://www.thepianoboys.com/), [Instagram](http://www.instagram.com/sbpianoboys), [Facebook](http://www.facebook.com/sbpianoboys), [YouTube](http://www.youtube.com/c/sbpianoboys), [LinkedIn](http://www.linkedin.com/in/sbpianoboys), [Music Resume](https://drive.google.com/file/d/1mdA1QDGQTGNyW4H2WuDsXoCapBxJjlfK/view)

Personal: [zeyn.schweyk.com](https://www.zeyn.schweyk.com), [Projects](https://2022mechatronicszeynschweyk.weebly.com/projects.html), [GitHub](http://www.github.com/ZSchweyk), [LinkedIn](http://www.linkedin.com/in/zeyn-schweyk)

**education**

**The Johns Hopkins University and Peabody Institute of Music – GPA: 3.74/4.0** Baltimore, MD

*B.S. in Electrical Engineering and Computer Science Double Major, w/ minoring in Music Performance August 2022 – May 2026 (Expected)*

**Santa Barbara City College – GPA: 4.0/4.0** Santa Barbara, CA

*2 A.A. degrees in Math & Science and Liberal Arts as Dual Enrollment High School Student, w/ over 60 GE credits completed August 2018 – May 2022*

**Engineering Academy at Dos Pueblos High School – GPA: 5.0/5.0** Goleta, CA

*August 2018 – May 2022*

**work experience**

**Radio Frequency (RF) Software Intern w/ SECRET Security Clearance** Goleta, CA

Toyon Research Corporation *June 2022 - Present*

* Starlink/OneWeb antenna setup and networking/firewall configurations across many routers with IPSec VPNs
* Electric motor design and testing using Ansys. Built Python codebase that sweeps through various design parameters to optimize performance for specific government contracts.
* Full-stack web app development (React JS and Python) to communicate with on-vehicle ROS nodes for geolocation tracking, sensor data collection, and data visualization, for defense research & testing
* Wrote desktop app to conduct experiments for antennas in an anechoic chamber with servo motors using C#, C++, VS & VS Code, .NET Framework.

**Computer Science Course Assistant** Baltimore, MD

The Johns Hopkins University at The Whiting School of Engineering *Fall 2023, Spring 2025*

* Intermediate Programming (EN.601.220) – assist students in class, hold weekly office hours, grade assignments, proctor exams in C & C++

**Mechatronics Programmer for Science Museums across CA** Goleta, CA

Dos Pueblos Engineering Academy *August 2021 - June 2022*

* Designed and created software for various exhibits to be displayed across museums in California, like the Exploratorium in San Francisco, as a HS Senior
* Implemented and deployed closed-loop feedback control (PID) systems, Apache webservers on Raspberry Pis, CRUD applications, client-server models, Python libraries to PyPI, and used Arduinos, various sensors and motors, and input devices
* Designed exhibit components with SOLIDWORKS and machined them w/ lathes, mills, & laser cutters, as needed
* View my [personal site](https://www.zeyn.schweyk.com) and [High School Portfolio](https://2022mechatronicszeynschweyk.weebly.com/projects.html) for a more detailed description of projects

**Software Contractor** Santa Barbara, CA

Santa Barbara Control Systems, Chemtrol Division *December 2020 - May 2021*

* Designed and created a time-clock system, suitable for any mid-sized company, used daily by employees and management w/ Python & SQL
* Implemented multiple versions of desktop applications compatible w/ Windows, Mac, & Linux. Dealt with Facial Recognition for automatic clocking in/out, automatic emails/alerts/database backups, regular employee reports linked to payroll, wage calculations, vacation & sick accrual & taken, tasks by employee & department, random motivational quotes, English & Spanish translations, and much more
* Pitched and sold system to CEO

**ThePianoBoys (aka SBPianoBoys)** California

Classical Piano Duo w/ my brother *January 2014 - Present*

* Perform solo, four-hands, & two-piano repertoire regularly at various venues, teach music to all ages, and [compose and arrange](https://www.youtube.com/playlist?list=PLVwCJZ4e7LgZ-fi2Ty8V5RPfVw5RuvFuZ) works
* Competed in & won countless performance competitions, state level composition competitions, & various music festivals across CA, individually and as a duo
* Studied Chamber Music at The Music Academy of the West under faculty from Juilliard, Curtis, University of California Santa Barbara (UCSB), and other institutions

**achievements**

* ’25 JHU William H. Huggins Award in ECE
* ’22-‘26 JHU Clark Scholar Member & Recipient
* ‘22 Student Elected Representative for Mechanical engineering Undergraduate Student Council (MUSC) at JHU
* ’22, ’25 Santa Maria Philharmonic Showcase Winner & Concerto Performer
* ‘21 AP Scholar w/ Distinction
* ‘21 FIRST Robotics Tidal Tumble Semifinalist
* ‘21 Santa Barbara Double Piano Concerto Competition Winner
* ‘20 Music Teachers’ Association of California (MTAC) Composers Today Symposium State Level Finalist
* ‘18 Jr. High Chess Tournament District Winner
* ‘18 Mock Trial Team County Winner as Pre-trial attorney
* ‘15 Jr. Black Belt in Kung Fu

**specialized skills**

* **Programming languages:** C, C++, C#, Python, Java, JavaScript, MATLAB, SQL, HTML, CSS
* **Design:** SOLIDWORKS, OnShape, & basic CAM software, KiCad, Logisim, LTspice, Wordpress
* **Manufacturing:** Lathe, Mill, Band Saw, Laser Cutters, 3D Printing, Soldering
* **AWS:** Lambda, API Gateway, EC2, Lightsail
* **Business:** Business Operation & Marketing, Event Planning & Coordination, Public & Motivation Speaking, Bookkeeping, Microsoft Office / Google Suite
* **Other:** PID loops, DNS Records, HTTP Requests, APIs, Backend/Frontend programming, Apache Web Server Setup, Makefiles, gdb, Valgrind, Git, GitHub, GitLab

**leadership & involvement**

* Founder of JHU Algorithmic Trading team, JHU Racing Club (Baja) Electronics/Software teams, Robotics Club, mobile app development for various JHU startups, AIAA, classical music improv & composition, tennis, pickleball, and cross country