

## EDUCATION

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**Bellevue College - Dual Enrollment**, Bellevue, Washington 2023 – June 2024  
*Relevant Coursework:* Linear Algebra, Differential Equations, Calculus III-IV, C++ STL and Algorithms

**Woodinville High School** - Woodinville, Washington 2020 – June 2024  
*Relevant Coursework:* AP Calculus I, AP Computer Science A/P, Advanced Programming 1-2, AP Physics 1, AP English  
*Honors:* National Honor Society Give 100 4x; Future Problem Solvers 2021-2024 Washington State Champion; First Tech Challenge 2023 Worlds Innovate Award Winner, 2024 Worlds Software Award Winner  
*GPA:* 4.2, *SAT:* 1410

**North Creek High School** – Bothell, Washington 2022 – June 2023  
*Relevant Coursework:* University of Washington Intermediate Data Programming (CSE 163)

## WORK EXPERIENCE

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**GameChanger Charity - Software Engineering Intern**, Irvine, California July 2023 – June 2024

- Engineered full stack software for website revitalization and backend development using HTML, CSS, and JavaScript
- Redesigned website in collaboration with graphic designers to drive improved user experience and traffic flow
- Enhanced site search engine optimization through high-quality backlinking with 3200+ targeted keywords

**Stockvocate LLC - Founder**, Woodinville, Washington October 2021 – Present

- Created a unified hub to access stock updates, market trends, business insight, buy/sell signals
- Software and user experience recommends buying and selling based on market volatility and user risk profile
- Developing paid subscription service to automate trades based on preset buy and sell inputs leveraging AI

## EXTRACURRICULAR EXPERIENCE

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**Woodinville High School Computer Science Club – President**, Woodinville, Washington 2021 – 2024

- Engaged school community by procuring guest speakers from Lyft, Minecraft, Microsoft, University of Washington
- Co-led school district coding competition with 50+ attendees from 4 high schools

**FTC Robotics 16379 KookyBotz - Lead Programmer**, Sammamish, Washington June 2022 – Present

- Implemented control algorithms such as PID, asymmetrical motion profiling, and second order inverse kinematics
- Developed physics model to dynamically account for changing robot center of mass, reducing positional error by 15%
- Produced open-source vision software published on GitHub and used by 800+ teams with 160,000+ impressions

**Future Problem Solvers Competition - Competitor, Evaluator**, Woodinville, Washington 2019 – 2024

- Organized training events to improve student performance, with 10+ mentees competing at the international level
- Four-person team consistently ranked in the top three internationally, competing at three world championships

## PROJECTS

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**Apparatus**, [github.com/ProDCG/Apparatus](https://github.com/ProDCG/Apparatus) 2022 - Present

- Developed a performance focused C++ math library, specializing in linear algebra and number theory

**Path Generation**, [github.com/ProDCG/HermitePathVisualizer](https://github.com/ProDCG/HermitePathVisualizer) 2023 - Present

- Created an interface for smooth interpolation across 3<sup>rd</sup>-degree polynomial Hermite splines in JavaFX

**Physics Engine**, [github.com/ProDCG/Collision-Simulation](https://github.com/ProDCG/Collision-Simulation) 2022 - Present

- Implemented kinematic engines for visual simulation of collisions and particles using OpenGL and SFML

## TECHNICAL SKILLS

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- Computer Languages:* C++, C, C#, Java, Python, HTML, CSS, JavaScript, OpenGL Shader Language
- Tools:* OpenGL, SFML, JavaFX, OpenCV, NumPy, Pandas, Firebase, JitPack, Java Swing, Scikit
- Applications:* Visual Studio, Android Studio, CLion, GitHub, Git, Gradle

## OTHER

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- Enjoy playing factory-building and logistical style video games and speed Rubik's cube solver
- Passionate about mentoring and guiding First Tech Challenge teams in their software, control algorithms, and design
- Varsity golfer, Woodinville High School
- Fascinated by quantum mechanics and complex math concepts