James Ye

289-885-2248 | jamesye.me | jamestk.ye@mail.utoronto.ca | linkedin.com/in/james-ye1 | github.com/jamestlye

Technical Skills and Portfolio

Languages: Python, C, C++, C#, JavaScript, HTML/CSS, MATLAB
Frameworks, Tools & Libraries: OpenCV, NumPy, Node.js, Three.js, 3D-printing, SolidWorks, Fusion 360, Linux
Others: Proficiency in Microsoft Office apps, including Exel, Word, and Powerpoint
Portfolio: jamesye.me

Education

University of Toronto — Toronto, ON
Bachelor of Applied Science, Mechanical Engineering (Transferring to Computer Eng.) — *Sept. 2021 – May 2025*

Experience

Mechatronics Engineer — March 2021 – Dec 2022
Oakville Centre for Vision (Contract) — *Oakville, ON*

- Prototyped versions of eyes tracking glasses using **Fusion360, 3D printing, and soldering** that eliminated tracking failure with over 225% improvement in pixels and frame-rates
- Reduce calibration failure by 300% **Pupil Capture, and OpenCV** by adding virtual reference surfaces plugins
- Collaborated in a 3 developer team and took heavy responsibility in the research and development of the glasses
- Modified Monogame Engine in **C#** to create stereoscopic 3D images with custom DLP-Link shutter glasses system

Robotics Design Team Leader — Sep. 2019 – Aug 2021
FIRST Robotics Team 1360 — *Oakville, ON*

- Designed and fabricated award winning robots with **SolidWorks** and in-house machinery
- Certified CSWP and trained robotics members CAD and design methodology, such as Agile
- Collaborated and tested autonomous driving paths for autonomous tasks during Covid lockdown

Front End Developer — May 2021 – Aug 2021
Ontario Youth Medical Society — *Oakville, ON*

- Designed the website from the ground up with 5 developers and met with stakeholders to evaluate and meet their requirements on time
- Developed the website with responsive design practices using **HTML, CSS, and JavaScript**
- Integrated Spotify, Google, and other podcast platforms to improve user experience by giving them options

Projects

MakeUofT 2022 Hackathon | *Navigation Essential Watch* — Feb 2022

- Fabricated and programmed wearable smart watch for the disabled and elderly to detect fall, obstacles, and irregular heart pulses, then it calls for help when accident occurs
- Built with **Arduino** and programmed in **C++** all within 8 hours
- Maintained the cost to be inexpensive and less than $100 dollar throughout the project

SHAD Canada 2020 Design Project | *Future Pharmaceutical "Solutions"* — July 2020

- Developed a prototype that tests and records medication dissolving characteristics in space to better understand medication digestion for future astronauts
- Led a group of 10 other individuals by formulating mechanism design and research topics
- Optimized designed in a confining 10x10x20 cm space using **SolidWorks** while keeping design under $100

Personal Project | *3D Printed RC Car* — Aug 2020

- Explored alternative inexpensive customizable RC Cars by designing a 3D printed chassis in **Onshape**
- Built RC Car from scratch by ordering, **soldering, 3D printing**, and programming the RC components
- Printed and made improvements to chassis resulting in over 200% increase in driving time compared to the first model before failure

Certification

Certified SolidWorks Professional: Credential ID: C-MR2SHB5NTK