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| Qichen Eric Dai  University of Toronto |  | 1169 – 209 Fort York Blvd,  Toronto, ON, M5V4A1  (647)631-9271  eric.dai@mail.utoronto.ca  <https://www.linkedin.com/in/qed11/>  <https://github.com/qed11> |
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| Experience |  | Education |
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| 2020 & 2021, May - Aug  Design Engineer Intern, *Legere Reeds*   * Renovated design procedures of synthetic double reeds. * Used Fusion360 and MeshLab to create digital reed surface models. * Used Python to preprocess, normalize and interface scanned reed models to design files for manipulation. * Created a Surface Sampler using Python and NumPy-STL library to create evenly spaced sample points on non-homogenous scan file surfaces. * Integrated CAD and CAM procedures during collaboration with colleagues.   2021 Sept - Present  Spacecraft Dynamics Engineer  *University of Toronto Aerospace Team*  Space System Division   * Developing Trajectory Analysis and Attitude Control System for Nanosatellite mission. * Developing Numerical Solver for optimizing attitude of spacecraft during imaging process.   2021, Sept - Dec  Electrical Engineer, *ESC204 – Praxis III*  Engineering Design Course   * Implemented a DC motor to control rotation of an extrusion screw for proxy melted plastic experiment * Used RP2040 microcontroller along with A4988 Motor Driver, controlled via CircuitPython. * The motor rotates in Different Speeds and Directions. States can be changed via a Button. LEDs are also implemented to indicate current mode of operation.   2019 Sept – 2021 Jun  Oboist, *Toronto Symphony Youth Orchestra*   * Principal Oboist in 2020/21 season. * Principal English Hornist in both seasons. * Performed two concerts live with recognizable solos. * Demonstrated leadership within woodwind section. * Demonstration of time management between schoolwork and extracurricular activities. |  | 2019-2024 (projected)  Candidate BASc. in  Engineering Science  Aerospace Option  University of Toronto  cGPA: 3.8/4.0  **Relevant courses**   * Ordinary Differential Equations * Partial Differential Equations * Linear Algebra * Scientific Computing * Aerodynamics/Gas Dynamics * Classical Mechanics/Dynamics * Digital and Computer Systems * Praxis I, II and III |
| Technical Skills |
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| Coding in: **Python**, **MATLAB**, C, Verilog, and Assembly Language  CAD: **Fusion360, MeshLab**  **Microcontroller,** **Motor Drivers,** and **CircuitPython**  Proficiency in **Microsoft Excel & Word**  Proficiency in Python packages including **PyTorch** and **Numpy**  **Optimization**  **Numerical Solver**  **Design Engineering** and **Integration** |
| Soft Skills |
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| * **Initiative for Challenges** * **Teamwork** and **Collaboration** with team/other subsystems * Good **Time Management** between multiple projects * **Quick Adaptation** to new environment and schedule changes * **Curiosity** about different subjects * **Leadership** within teams |