Kevin Chen

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EDUCATION

Northwestern University, Evanston IL ***September 2020-June 2024***

- Bachelor of Science in Mechanical Engineering, Minor in Environmental Policy and Psychology
- GPA: 3.84/4.00

SKILLS

- Programming (MATLAB, Python, CSS, HTML)
- Oscilloscopes and breadboarding (nScope)
- Mill and lathe trained (Robotics Machining)
- CAD and Simulations (SOLIDWORKS, Abaqus)
- Confocal and Electron microscopy (ImageJ)
- Wet laboratory equipment and manual tools

EXPERIENCE

Northwestern University Bazant Materials Science Laboratory, Evanston IL ***May 2021-Present***

Undergraduate Researcher

- Performing **fracture analysis** on composites, shale, and concrete to determine material properties for manufacturers
- Designing Biaxial tension-compression model through SolidWorks and stress analysis with **Abaqus FEA**
- Gained **Shop certification** in CNC machining specimens using mill, lathe, drop saw, band saw, etc.

Ann & Robert H. Lurie Children's Hospital, Chicago IL ***March 2021-Present***

Lurie Inventor

- Creating the X-Strap, an infant restraint device for emergency medical transportation
- A product of Northwestern DTC, **sole team in 2021 to be selected** for continued evaluation
- Finalizing a transfer of rights to Lurie's Children's Hospital for potential patenting

NUSolar & Northwestern Formula Racing, Evanston IL ***September 2020-Present***

Chassis Team Member

- Assisting manufacturing of Solar Car 7 and contributing to the development of Solar Car 8 through CAD (**SolidWorks, Abaqus FEA**) in an independent project with NUSolar leadership
- Specializing in **composite fabrication and laser cutting** for current Formula vehicle

Stark Neuroscience Research Center STEM/SEED Program, Indianapolis IN ***March 2017-December 2019***

Intern and Mentor

- Operated confocal microscope to model specimen morphology and oversaw staining and processing of brain slices
- Authorship in paper(s) submitted to **Journal of Comparative Neurology** - #JCN-21-0131, ISEF Regional Science Fair Senior Division 1st place, 2019 American Psychological Association Award
- Logged 1200 lab hours, data used in lab grants, presented in multiple poster sessions, and authorship in pending papers

LEADERSHIP

VEX Robotics Team, 7701X, Zionsville IN ***August 2017-May 2020***

Lead Designer and Builder

- 2019 & 2020 **World Championship Divisional 1st place and finalists**, 2019 **1st place World Driver Skills Ranking**, VEX Robotics **2020 National Signature Event Tournament Champion**, 8x Regional Tournament Champions
- Constructed lift mechanisms (four-bar, double reverse four-bar, scissor lift), improved sensor suite (**ultrasonic, IMU, shaft-encoder**), 3D-printed custom gears and sprockets for drivetrain motion, and upgraded pneumatics systems
- Applied **PID controllers** as well as **odometry** for autonomous motion and tracking of robot

ZCHS Renewable Energy, Zionsville IN ***August 2019-May 2020***

Project Manager

- Student founder, sought grants and investments from local community to develop solar grid to power community schools to facilitate net-zero emissions, coordinated fundraising and guest speakers