# Yue (Mike) Yu

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## EDUCATION

**Columbia University,** New York, NY — Expected Graduation May 2028
*BS in Biomedical Engineering; GPA: N/A*

**University of Illinois Urbana-Champaign,** Urbana/Champaign, IL — Aug 2024 - May 2025
*BS in Bioengineering; GPA: 3.96/4.0, Dean's List, Tau Beta Pi Society*
*Relevant Coursework: MATH-285 Intro to Diff. Eq., BIOE-210 Signals & Systems in Bioe., BIOE-205, Lin. Alg.*

**Culver Academies,** Culver, IN — Aug 2020 - Jun 2024
*GPA: 4.51/4.00, National Cum Laude Society*
*Relevant Coursework: Multivariable Calculus, AP Calculus BC, Honor in Engineering, AP Biology*

## RESEARCH EXPERIENCE

**NeuroTech, Universum,** Officer in Model Development Team, Urbana, IL — Aug 2024 - May 2025
- Participated start-up initiation at Research Park and gained $5000 for the project
- Streamlined brainwave data collection with SOP for IRB approval and optimized EEG acquisition using Lab Streaming Layer, reducing time delay to 0.005 seconds and improving synchronization accuracy.
- Led 7 undergrads to implement GMM and SVM to classify EEG dataset with grasping motion with 40% accuracy.

**Yu Research Group,** Undergraduate Researcher, Urbana, IL — Aug 2024 - Now
- Utilize Drawn-on-Skin conductive Ink for detection of various bio-signals, quantifying stress through bio-signals.
- Mentor fellow undergraduate students coming to the lab.
- Conducted data analysis and feature extraction of multiple subjects' datasets.
- Ensured ink safety and performance, achieving 100% biocompatibility and maintaining 90% signal integrity under physical activity with 50% stretch. Conduct **weekly reliability** and **sheet resistance tests** on ink prototypes.

**Mobility and Fall Prevention Research Laboratory (MFPRL),** Researcher, Urbana, IL — Aug 2024 - May 2025
- Detected brain wave activity during walking to identify patterns that aid in **fall prevention**.
- Collected EEG, hemoglobin data, and foot pressure distribution using a variety of sensors.
- Implement synchronization devices to streamline the data stream from pressure, motor, and visual sensors.

**Levitating Magnetic Insoles to Alleviating Plantar Fasciitis**, *Researcher*, Culver, IN — Aug 2022 - Jun 2023
- Created a levitating sole that uses neodymium magnets to alleviate plantar fasciitis, achieving a repulsion of 84.57 lbs, an unprecedented function in traditional EVA foam soles.
- Won 1st Place in Engineering at the 2023 Northern Indiana Regional Science Fair, 3rd Place at Hoosier Indiana Science Fair, Yale Science and Engineering Award, finalist in the International Science & Engineering Fair (ISEF)

## PUBLICATION

- Yue Yu. (2024). Levitating Magnetic Insoles: A Novel Approach to Alleviating Plantar Fasciitis Through the Reduction and Redistribution of Plantar Pressures. *Journal of Innovations in Medical Research*, *3*(3), 14–35. Retrieved from https://www.paradigmpress.org/jimr/article/view/1256

## WORK EXPERIENCE

**Monad Biotech Co., Ltd.**, *Biotechnology Device Researcher*, Suzhou, China — Jul 2024
- Conducted product research and development on automated DNA polymerase apparatus, improving **nucleotide purification** efficiency for PCR processes.
- Assisted in product evaluation for a chemiluminescence imaging device.

## SKILLS AND INTERESTS

- *Computer Skills: Python, C++, Java, MATLAB, Arduino*
- *Biomedical Research: Electrophoresis, RNAi, PCR, CRISPR, Gradient dilution, Fluorescent Microscopy*
- *Language Skills: English, Latin, Mandarin*