Yizhan Gu

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EDUCATION

Suzhou High School of Jiangsu Province — **Jiangsu, China**
Senior High School Diploma in Science — *Sep 2016 – Jun 2019*

Harbin Institute of Technology — **Heilongjiang, China**
Bachelor of Engineering in Electrical Engineering and Automation — *Aug 2019 – Jul 2023*

University of California, San Diego — **California, USA**
General Studies and Humanities (Exchange) — *Mar 2023 – Jun 2023*

University of California, San Diego — **California, USA**
Master of Mechanical and Aerospace Engineering (PhD Qualification Exam Passed) — *Sep 2024*

University of California, San Diego — **California, USA**
PhD Student in Mechanical and Aerospace Engineering — *Sep 2023 – Present*

SKILLS

Language Certificates
- IELTS Overall Band 7.5, GRE General Test 326, CET Band 6 Test 615

Programming Skills
- Proficient in R, Julia and Latex, Familiar with Python, MATLAB and C

AWARDS & HONORS

First Prize of the Chinese Art Star International Exchange Performance *2018*
- Prize for Erhu Senior High Group

The Eighth Place in Table Tennis Tournament of Suzhou Youth Sports League *2019*
- Senior high school men's singles

May Fourth Outstanding Communist Youth League of HIT *2020*
- Prize for "Rising Star of Culture and Sports"

Outstanding Individual Project Award of the Returning Visit to Alma Mater *2020*
- The social practice activity held by HIT Communist Youth League

Second Prize of the Annual College Project *2020*
- Research on application of gamification thinking

Second Prize of the National Academic English Vocabulary Competition *2020*
- The fifth NAEV competition held by China EAP Association

Second Prize of Original Art Works Competition of HIT *2020*
- Painting prize of Basic-Student Department

Interdisciplinary Contest in Mathematical Contest in Modeling *2021*
- Participation as the team leader, responsible for algorithms and programming

Blended Learning MIT *2021*
- Participation in group discussions and completion of the final challenge

RESEARCH & PUBLICATIONS

Sequential Circuit for Detecting Continuous Input Variables *2020*
- Programmed a Mealy-type state machine in Verilog HDL for FPGA applications

Development of a Programmable Character Generator *2021*
- Designed the driver circuit for an LED luminescence matrix, utilizing EPROM memory for data storage

Design of a Magnetically Coupled Resonant Radio Energy Transmission System *2021*
- Developed a resonant transmission system using MATLAB programming and PCB layout design

Design of Reversible DC PWM Drive Power Supply *2022*

- Designed a DC motor pulse width modulation speed regulation drive power supply and performed chip soldering

Design and Construction of Vehicle Tracking Circuit Board *2022*
- Created schematic diagrams and arranged PCB circuit board layouts for effective tracking applications

Evaluation of Solar Energy Resources in Heilongjiang Province *2022*
- Project funded by the State Grid Corporation of China®

Total Energies® SCALED EV Project *2023*
- Research on local green energy tracking and carbon intensity analysis, culminating in a comprehensive report submission

Flexibility Clustering of UCSD Charging Sessions with Dynamic Time Warping *2023*
- Conducted pattern recognition on drivers' charging behavior utilizing unsupervised machine learning techniques

Journal: Regime-dependent 1-min Irradiance Separation Model with Climatology Clustering *2023*
- Yang, D., Gu, Y., Mayer, M.J., Gueymard, C.A., Wang, W., Kleissl, J., Li, M., Chu, Y., Bright, J.M. (2023). Published in Renewable and Sustainable Energy Reviews

Conference: Brick Schema Standardized Plug Load Control Strategies for Load Reduction *2024*
- Chia, K., Ben-Ayed, M., Eshwar, S.H., Zhang, C., Chen, E., Gu, Y., Kleissl, J., Khurram, A., Wolf, J., Van Sant, A., Trenbath, K. (2024). Preprint in ACEEE and funded by the California Energy Commission®

Scalable Electric Vehicle Load Forecasting with Decentralized Model Predictive Control *2024*
- Implemented decentralized optimal control methodologies to address challenges in the electric vehicle charging domain

PROFESSIONAL & CAREER ENGAGEMENTS

Vice President of Single Bed Band *Nov 2016 – May 2018*
- Recruited over ten members for a high school rock band as the lead guitarist
- Organized campus and commercial performances

Student Leader of the Class *Sep 2019 – Jul 2021*
- Teaching assistant with class culture, sports activities, and academic coursework

Campus Ambassador for Returning Visit to Alma Mater *2020*
- Organized recruitment meetings and provided personalized advice to prospective students

Capgemini China® Campus Ambassador *Jun 2022 – Jun 2023*
- Organized advertising events and recruitment initiatives on campus

Journal Reviewer *Nov 2022 – Present*
- Reviewed manuscripts submitted for publication in Solar Energy

Graduate Student Researcher *Jul 2023 – Present*
- Affiliated with UCSD Grid Lab