DUO ZHANG

(+86)17806260517 ⋄ galenzhang@mail.sdu.edu.cn

EDUCATION

Shandong University
B.E. in Computer Science Department *2018/06 - 2020/06*
Undergraduate in Energy and Power Engineering Department *2016/09 - 2018/06*
Thesis: Human-like Trajectories Generation

POSITIONS AND EMPLOYMENT

Shandong University
Research Assistant, Interdisciplinary Research Center *2020/01 - Present*
UCLA CSST Program
Research Assistant, Machine learning & Genetics Lab *2019/07 - 2019/09*

RESEARCH INTERESTS

Robotics, Human Robot Interaction

RESEARCH EXPERIENCES

Changhe Tu's lab, Interdiscipinary Research Center, Shandong University *2020/01 - Present*
Research Assistant *Qingdao, Shandong, China*

- Project 1: I am developing a tunneling-free, second-order convergent, model-based grasp policy searching method, which is able to generate the intrinsic parameters of the Barrett Hand with high grasp quality while inputting the depth image of target object.
- Project 2: I designed a model using LSGAN which can generate human-like trajectories for some scenarios involving human robot interactions with certain given properties like smoothness and length etc. The main purpose of this project is to make the robot behavior more understandable and legible for human partners.

Sriram Sankararaman's lab, Computer Sciense Department, UCLA *2019/07 - 2019/09*
Research Assistant *Los Angeles, CA, USA*

- We developed a new approach leveraging Tensor Component Analysis (TCA) to estimate cell-specific expression levels from bulk tissue measurements using single nucleotide polymorphisms (SNPs) as predictors. We show that this model performs well in simulations and applied it to a cohort of around 1,500 individuals with expression measured in blood, identifying SNPs that predict a significant proportion of variation in expression levels in four major white blood cells. These SNPs and their estimated effects can be used for cell-specific TWAS in large cohorts with genetic data such as the UK Biobank, which includes over 500,000 samples.
- I built and published a R package named TWAS for our project.

Youjun Lu's lab, National Astronomical Observatories, CAS *2018/04 - 2018-05*
Undergraduate Researcher *Beijing, China*

- I simulated the gravitational wave signals with different parameters in a wide range and set several different templates. Given the templates I trained a Bayesian Classifier determine the likelihood for a signal to be a gravitational wave and matching the parameters with the templates.

Guochao Gu's Lab, Material Science Department, Shandong University *2017/07 - 2018/07*
Undergraduate Researcher *Jinan, Shandong, China*

- Project 1: I was taking charge of metal grain modeling and grain edge recognition. The grain modeling part was intended to build the 3D grain voronoi cells to simulate the coordinates of all the vertices and exporting them to ABAQUS for analyzing the mechanic performance
- Project 2: I used computer vision skills to determine the edge of the grain and binarize the real metallographs.

PRESENTATION

Identification of cell-type-specific genetic regulation of gene expression for transcriptome-wide association studies
Poster presentation at UCLA CSST program

HONORS AND REWARDS

National Scholarship
Sponsored by Ministry of Education of the People's Republic of China
Excellent Cadre Scholarship
Sponsored by Shandong University
Excellent Student Scholarship
Sponsored by Shandong University
Provincial Third Prize of China Undergraduate Mathematical Contest in Modeling
Sponsored by China Society for Industrial and Applied Mathematics
Provincial Third Prize of The Chinese Mathematics Competitions
Sponsored by China Mathematics Society
Honorable Mention of Mathematical Contest in Modelling (MCM)
Sponsored by Mathematical Association of America
Province Third Prize of Internet+ Innovation and Entrepreneurship Competition
Sponsored by Ministry of Education of the People's Republic of China
Shandong University Basketball Game Advanced Individual
Sponsored by ANTA sports

SKILLS

Programming Languages
C++, Python, JavaScript, Java, Matlab, R
Other Skills
Metal Material Processing (including turning, milling, planing, forging, casting, molding, 3D printing and some CNC technologies)

PERSONAL TRAITS

Highly motivated and eager to learn new things
Strong leadership and cooperation skills
Ability to work as an individual as well as in group
Enthusiast for basketball and power lifting (newbie in power lifting)
Skilled calligrapher in Chinese