



Education Experiences

Aalto University - Mechanical Engineering MSc (performance: Aalto Uni Tuition fee waiver 100%)	2020.08-2022.07
Technische Universität, München - Computer Science & Artificial Intelligence (Exchange Student)	
Shanghai University - Mechanical and Electrical Engineering (MSc)	2016.09-2017.09
NingboTech, Zhejiang University - Machine Design Manufacturing and Automation (BE)	2012.09-2016.06

Working Experiences

Research Specialist, Isaware	2020.09-2021.06
<ul style="list-style-type: none">● Detected object of drone with passive radar as the task of semester project (AviGuardX)● Participated in developing a project plan (market background, personnel organization, risk analysis, working task benchmark, distribution of personnel responsibilities)● Investigated the target recognition papers on the detection of drones by hardware● determine a plan considering passive radar as detection scheme● Took charge of collection of dataset, when using Kerberos-SDR to gather images with Jetson● used API "labelimg" to define the trajectory of drone and label them● Trained dataset with pixels 600x600RGB from SDR, considering ResNet as backbone training network of Faster-RCNN	
Software Development intern, Fourier Intelligence	2020.08-2020.10
<ul style="list-style-type: none">● Gained experience of software system "exops-m2" developed by Unity3D● Updated key code to modify parameters of robot motion for capturing objects and the intensity of force feedback● Scored first prize in the "Bloom cup" contest for 5G Application by China Telecom Department● Developed a Ruijin intelligent robot rehabilitation port based on 5G monitoring and AI control● Achieved the arm's posture change using D-H transformation with Xsens	
Design Engineer, Shanghai Mintai Hydraulic Co., Ltd	2020.03-2020.07
<ul style="list-style-type: none">● Designed 3D structure with solidworks● picked up standard parts within the ERP system and translated hydraulic standard manuals	
Mechanical Engineer, Shanghai Apollo Machinery Co., Ltd	2018.10-2019.06
<ul style="list-style-type: none">● Attended research project "Tianwan Damaged Fuel Sealing Bottle Localization"● Assisted in preliminary measurement data analysis, structure design, medium-term manufacture, nondestructive testing, and expert evaluation.● Attended the ASME Nuclear Forensics and Earned certificates NA, N, N2, N3 with team● Took charge of the ASME Boiler and Pressure Vessel Code, Section III, division 3 WC&WA article part, 2017 Edition with Addenda up to and including N/A and relevant design of Spent Fuel Dry Storage Containment	

Relevant projects

Incursion of probability distribution of Road surface in the short & long term	2020.09-2020.10
<ul style="list-style-type: none">● Defined basic concepts of abstract random load process and assumed probability distribution of random road in the long-term● Took charge of block of algorithm, simulated the variation of displacement sensor in the vertical direction● Deduced probability distribution of short/long-term, namely Gaussian distribution and Reileigh distribution● Used rainflow cycle count, fast fourier transform (FFT) as well as window function in derivative	
Tissue type classification based on microarray gene expression profile	2021.01-2021.03
<ul style="list-style-type: none">● Handled 3000 gene characteristics and 2000 samples● Read csv file with dataframe, parse them into numpy array, and divide them into training set and testing set● Found best SVM model with the help of training set and StratifiedKfold● In two categories, optimized logistic regression with SVM model to get optimal accuracy	
NCPC Competitive Programming	2021.09-2021.10
<ul style="list-style-type: none">● Standing 198	
Several Labs at TUM	2021.09-2022.03
Autonomous Driving (handled 3000+ lines in python), Cyber Physical System (1000+ lines in C)	

Others

Skills: Data Analysis, 3D Modelling, Modelling (AI) & Estimation, Matlab, C/C++(basic), Python, Linux
Languages: German (TestDaf B1-B2), Swedish, Chinese
Hobbies: Basketball, Marathon

Other websites

www.github.aaltoyuyukun, [linkedin.com/in/yukunyu](https://www.linkedin.com/in/yukunyu)