JINXUAN TANG

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EDUCATION

Columbia University in the City of New York New York, US
M.S. in Electrical Engineering, current GPA: 4.0/4.0 Expected Dec 2022

- Courses: Reinforcement Learning, Applied Machine Learning, Statistic Learning, Fundamental of Speech Recognition, Computer Vision, Large-scale Stream Processing, Introduction to Blockchain Technology

University of Electronic Science and Technology of China Chengdu, CN
B.S. in Electronic Information Science and Technology, GPA: 3.82/4.0 Jun 2021

- Awards: Second Class for CASC Scholarship, Outstanding Students Scholarship, Exemplary Students Scholarship
- Courses: Discrete Signal Processing, Signals and Systems, Microwave Technique, Electromagnetic Field, Microwave Solid-State Circuit, High-Frequency Electronic Circuit, Antenna Theory, Application & Design of Digital Logic

LANGUAGE AND IT SKILLS

- **Programming Languages:** proficient in MATLAB, Python, familiar with R, C++, Verilog
- **Hardware Tools:** Circuit Design (Multisim, Altium Designer, ADS, Allegro Cadence), EM Simulate & Design (HFSS, CST), Digital Logic Design & Control (Keil uVision, Vivado, PLC S7-200)
- **Software Tools & Frameworks:** Scientific Analysis (NumPy, SciPy, Pandas), Audio Processing (Kaldi in Linux), Computer Vision (OpenCV), Machine Learning (PyTorch, TensorFlow, Scikit-learn), Large-scale Processing (Spark)

WORK EXPERIENCE

Siemens Ltd. China Kunming, CN
Remote Part-time Assistant of Circuit Design Engineer Jul 2020 - Aug 2020

- Employed TPS62160-Q1 (TI Inc.) to design a car charger (DC12V-DC5V converter) with size less than 20mm*50mm
- Conducted demand analysis, designed & optimized PCB layout in Cadence Allegro and Altium Designer
- Tested functions (UVLO, soft start, PG, etc.) of the manufactured demo by oscilloscope and VNA

Yunnan Beidun Technology Co., Ltd. Kunming, CN
Communication Engineer Intern Jul 2019 - Aug 2019

- Took part in the Rednet broadband construction project of Yunnan Provincial Special Communication Bureau
- Installed Huawei NE20E Series Router and firewall according to customers' requirements, installed optical fiber network cable, and applied broadband switching network technology of Gigabit Ethernet

Institute of Computing Technology, Chinese Academy of Sciences Beijing, CN
DIP Summer Intern Jul 2018 - Aug 2018

- Led a team of 3 finishing Pattern Recognition-Face Recognition project including traditional & NN based methods
- Designed and optimized a facial recognition system using convolutional neural network (CNN) in both Python (PyTorch) & MATLAB (MatConvNet), with 98.8% accuracy on Yale Face Database

RESEARCH

Columbia University in the City of New York, New York, US Sep 2021 - Dec 2021
Discrete Wavelet Denoising for MFCC Noise-Robustness Improvement in ASR

- Constructed & optimized an ASR system on AMI corpus using Kaldi toolkit in Linux, with final accuracy of about 80%
- Added white noise to data, applied wavelet denoising with different parameters in Python and tested final performance

Columbia University in the City of New York, New York, US Oct 2021 - Dec 2021
Tackling Obstacle Tower Challenge using Deep Reinforcement Learning Methods

- Addressed Obstacle Tower by combining ICM with PPO and A2C to train the agent in Python, with max hit floor of 6

University of Electronic Science and Technology of China, Chengdu, CN Oct 2020 - June 2021
Terahertz Time-domain Spectroscopy High-Frequency Signal Denoising Techniques

- Reconstructed transfer function of THz-TDS signal using genetic algorithms in MATLAB, increasing SNR up to 5 dB
- Combined wavelet denoising with bilateral Gaussian filter and wiener deconvolution to denoise THz-TDS signals

University of Electronic Science and Technology of China, Chengdu, CN Nov 2018 - Nov 2019
Characterization of High-Efficiency Coupling Between Cassegrain Antenna and Single-Mode Optical Fiber (SMF)

- Built a 3D ray-tracing model in MATLAB to simulate laser transmission between Cassegrain antenna and SMF
- Improved efficiency of coupling between Cassegrain antenna and SMF by 55.23% using Fresnel spiral zone plates

Tsinghua University, Beijing, CN Aug 2019 - Sep 2019
Trend of Big Data Technology Development – A Data-Driven Analysis

- Utilized AI mining tools, MATLAB to process & visualize analytic results on the development of big data technology
- Published *Trends Prediction of Big Data: A Case Study based on Fusion Data* as 1st author on *Procedia Comput. Sci.*