ZHANG, Hongzhen

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My Personal Website: Hongzhen's Personal Website (hongzhengit.github.io)

Education Backgrounds

Tianjin University (member of 985, 211 universities) *2017.09 – 2020.01, GPA: 85/100*
Master's degree of Engineering, affiliated with State Key Laboratory of Precision Measuring Technology and Instruments
Xiamen University (member of 985, 211 universities) *2013.09 – 2017.06, GPA: 82/100*
Bachelor's degree of Engineering, Major in Photoelectronic Measurement Technology
Double degree of Economics, Minor in Mathematical Statistics

Publications

- **Extension of Terahertz Time Domain Spectroscopy: a Micron-level Thickness Gauging Technology**
  Hongzhen Zhang, Lili Shi, Mingxia He[*]. *Optics Communications*, 506 (2022) 127597.
- **The Application of Stochastic Optimization Algorithm in Terahertz Thickness Measurement Technology**
  Hongzhen Zhang, Mingxia He[*], Lili Shi, Pengfei Wang. *Spectroscopy and Spectral Analysis*, 40(2020) 3066-3070.
- **A terahertz non-polar material detection technology based on Rouard's Method**
  with Mingxia He, Lili Shi and Pu Wang. *Invention patent*, Patent No. CN201910303091.9, Waiting for granting.
- **A thickness measurement technology developed with terahertz spectrum**
  with Mingxia He, Lili Shi and Pu Wang. *Invention patent*, Patent No. CN201811197783.1, Granted.
- **A multispectral imaging device for the meibomian glands of human eyes**
  with Yanping Chen, Tianyu Zheng and Yifan Yang. *Invention patent*, Patent No. CN201610250677.X, Granted.

Research Experiences

Research on the information extraction methods for Terahertz Spectra
Tianjin University, Funded by National Natural Science Foundation of China (NSFC) (Grant No.61675151).
Research on a multispectral imaging device for meibomian glands of human eyes
Xiamen University, Undergraduate research project.
Research on HAR (Heterogeneous Autoregression) models for Shanghai Composite Index
Xiamen University, Graduation thesis for my double degree of Economics.

Working Experiences

Discover Financial Service (DFS, Shanghai COE) *Senior Analyst, 2020.03 – 2022.07*
- *Project 1*: Developed a Time Series Forecast Model for home loan application volumes to catch the increasing trend in home loan market and help with the future workforce management.
- *Project 2*: Constructed a Neural Network compliant recognizer based on pre-trained Bert model, combined it with a Random Forest classifier to allocate customers' complaints into specific categories automatically.
- *Project 3*: Designed and built a Data Management Platform with PyQt framework for structuring and maintaining invoice data from third-party vendors.

Analog Devices (ADI, Beijing Office) *Part-time Algorithm Intern, 2019.07 – 2020.01*
- Borrowed the c-Lasso algorithm from Muhammad Tabassum (2018) to get a simplified Generalized Memory Polynomial (GMP) Model with sparse parameters.

Awards

- Innovation Award at Discover Financial Service
- Excellence Award at Discover Financial Service
- 1st prize of China National Mathematical Modeling Competition (Undergraduate Group)

Programming Skills

I have solid skills in Python, MATLAB and SQL language and I am also familiar with R software. For more information about myself and my research/working experiences, please check my personal website https://hongzhengit.github.io/.