LIZHI ZENG

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EDUCATION

- **MSc, Electrical Engineering, University of California, Los Angeles**, United States 03/2017
  GPA: 3.67/4.0
  Main Courses: Linear Programming, Large-Scale Data Mining: Models and Algorithms, Pattern Recognition and Machine Learning, Statistics Programming, Topics in Data Structure: Big Data Analytics
- **BEng, Automation, Guangdong University of Technology**, China 07/2015
  GPA: 4.04/5.0 (Top 5%)

SKILLS

- **Programming Languages:** Java, Python, R, Matlab, C/C++, shell **Databases:** HBase, MPPDB, MySQL, Druid
  BigData/Hadoop Technologies: HDFS, Spark, Kafka, Oozie **Operating Systems:** Windows, Linux, macOS

RESEARCH EXPERIENCE

- **Research Associate, Cedars-Sinai Medical Center**, Los Angeles, United States 03/2016 - 03/2017
  Biomedical Imaging Research Institute (BIRI)
  - **Main Project**: Improving the MRI(Magnetic resonance imaging) system with fitting algorithms and machine learning techniques.
  - **Responsibility**:
    - Used Matlab to generate MRI shimming simulation.
    - Improved the fitting algorithm to obtain the optimized DC(direct current).
    - Designed and built simulation toolkits to achieve the optimized MR(Magnetic resonance) coil designs.
- **Research Assistant, Guangdong University of Technology**, Guangzhou, China 06/2013 - 06/2014
  - **Main Project**: Improving generation methods of Nakagami-m distributed random variables. Nakagami-m distributed RVs are important in wireless-communication simulation.
  - **Responsibility**:
    - Reproduced the algorithm for generating bivariate Rayleigh and Nakagami-m distributed random variables(RVs).
    - Optimized the original algorithm, improving the accuracy and efficiency of generating Nakagami-m RVs

WORK EXPERIENCES

- **Software Engineer, HUAWEI TECHNOLOGIES CO., LTD.**, Shenzhen, China 03/2018 - now
  Network Product Line
  - **Main Project**: Premium Broadband(NCE-FAN) in Network Cloud Engine(NCE). Premium Broadband aims to apply Big Data and AI to improve user experience and operational efficiency.
  - **Responsibility**:
    - Developed two key features, PON(Passive Optical Network) diagnosis and Wi-Fi tune-up, of Premium Broadband.
    - Developed toolkits for the research and development team.
    - Designed, built, and deployed an automatic verification system as PaaS(Platform-as-a-Service).
    - Mentored two engineering interns in developing software tools and systems.

SELECTED PROJECTS

- **PON(Passive Optical Network) diagnosis(Feature of Premium Broadband)** 09/2018 - now
  - This feature enables NCE to provide topologies of passive optical networks based on data. The system can learn realtime network structures and fault locations automatically from device data.
- **Wi-Fi tune-up(Feature of Premium Broadband)** 07/2018 - now
  - This feature enables NCE to organize access points(AP), as known as wireless routers, automatically. The system can calculate experience score manually or periodically, and reassign channels of APs to achieve globally optimal user experience.
- **Automatic verification system** 06/2018 - now
  - This automatic verification system aims at testing stability and reliability of big data solutions in a convenient way. The system can learn patterns from real data and reproduce data given different conditions., and complete the verification process automatically from data generation to results validation.
- **Cross-Device Entity Linking (CIKM Cup 2016)** 02/2017 - 03/2017
  - This project aims to enable advertising companies to identify users and serve relevant ads to them. We trained a classifier to identify the same person across devices without any persistent user identities.
- **'iPRES,' a new hardware-based imaging platform for MRI(Magnetic resonance imaging)** 03/2016 - 03/2017
  - This project aims to adjust the inhomogeneity of magnetic fields to improve MR image quality. We created a toolkit to simulate MR imaging shimming, and obtain optimal DC currents and designs of shimming MR coils with fitting algorithms. More than 20% improvement in global shimming. And we reduced 70% of coils while maintaining the same shimming performance.

PATENTS

- Yuenan Zeng, Yan Chen, Lizhi Zeng, Rui Zhang, Rui Peng, Kangping Chen. A measurement methods of cogging torque in permanent magnet machines. Chinese Patent #CN105841867A issued 03/26/2018, filed 08/10/2016

AWARDS AND HONORS

- Excellent in probation appraisal of Huawei Technologies (2018)
- The Second Prize Scholarship of Guangdong University of Technology (2013 & 2014)
- The Provincial-level Second Prize of the 13th Challenge Cup Contest in China (2013)
- The Third Prize of SEMIKRON Scholarship (2013)
- Model Student of Academic Records of Guangdong University of Technology (2012 & 2014)
- National Scholarship of China (2012)
- The First Prize Scholarship of Guangdong University of Technology (2012)

REFERENCES

Director of Magnetic Resonance Engineering
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