Zhiqiang (Jerry) Peng

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Highlights of skills and experience

1. Proficient in statistical analysis, data mining and machine learning techniques;
2. Strong working experience with scripting languages R, Matlab, and Python;
3. Programming experience with C++ / C#, and Java;
4. Knowledge of SQL and databases;
5. Experience with Hadoop big data ecosystem, including Map-reduce, Pig, Hive, Mahout, Spark and Shark;
6. Familiar with Amazon AWS cloud (EC2 , EMR and S3)
7. Experience in digital signal and image processing.

Education: Ph.D. in Physics, University of Göttingen, Germany

Training and certificates: **Data Science** specialization on Coursera by Jones Hopkins University

Work Experience:

1. 4/2014 – present Massachusetts

   Freelance Consultant on data analysis and physics research. See my recent projects here.

2. 1/2008 - 3/2014 Senior Scientist, **Zink Imaging, Inc.** , Bedford, Massachusetts

   a. Worked with LG Electronics Corp. (OEM) to develop the Pocket-Photo Printer, including designing experiments, acquiring data, performing calibrations and developing numerical models to optimize the performance of the thermal printer;

   b. Analyzed manufacturing data to improve the production and product quality;

   c. Developed a model-based calibration system as an in-line data acquisition & analysis tool for monitoring and controlling the quality of printing media;

   d. Developed a printing-speed correction algorithm, which enables the printer to print at different speed without having to perform calibration for each printing speed.

3. 8/2007 - 12/2007 Senior Scientist, **Ambios Technology, Inc.**, Santa Cruz, California

   Designed optical imaging system and developed image processing algorithms.

4. 12/2002 - 8/2007 Senior R&D Scientist, **Pacific Nanotechnology, Inc,** Irvine, California

   Developed new AFM products, including both hardware and software.

   Selected projects: developed a novel force sensor and a laser-less Atomic Force Microscope (AFM); developed a high-speed AFM; developed Labview drivers for our AFM system; developed algorithms for image processing, feedback control, tip-approach and cross-talk correction.

5. 1/2000 - 12/2002 Research associate **Department of Physics, Texas A&M University**

   Performed research on nano-technology; developed a low-temperature scanning probe microscope to image and manipulate single molecules on metal surfaces; developed theoretical models to understand the interactions between single molecule and metal surface.