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## EDUCATION

- **The University of Georgia, Athens, GA** August 2013-present  
*Ph. D. student of Science in Computer Science* **Cumulative GPA: 3.95**  
 Courses taken: Massive Mining of Data, Software Engineering, ADV Topics in Data Intensive Computing, Computer Network, Machine Learning, Image Processing, Evolutionary Computing, Graph Theory, ADV Biomedical Image Analysis, Biomedical Image Analysis, Automata and Formal Language
- **Huazhong University of Science and Technology, Wuhan, China** August 2009 - June 2013  
*Bachelor of Control Science and Engineering* **Cumulative GPA: 89.01/100, Rank: 11/223**  
 Thesis: Simultaneous Multi-frame Super-resolution Restoration (image processing)

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## PROJECT EXPERIENCE

- **Big Data and Machine Learning related:**
- Autism Spectrum Disorder(ASD) related Large data mining using **Apache Spark**
    - ✓ Used Apache Spark performing high-speed feature metric computing
    - ✓ Analyzed clustering of brain functional networks in ASD with comparisons to control subjects
  - Machine learning implementations using
    - ✓ Implemented Naive Bayesian classification algorithm using **Hadoop** API
    - ✓ Implemented K-means clustering tool using **Apache Spark**
    - ✓ Implemented Stochastic Gradient Descent algorithm using **Apache Spark**
    - ✓ Designed a template supervised dictionary learning algorithm for fMRI images decomposition
- **Software engineering related:**
- “Dawg-trades”: UGA On-Line Auctioning System project
    - ✓ Mastered skills in HTML design, jsp and database
    - ✓ Gained Software development experience
- **Deep Learning related:**
- Classification using Deep Learning Neural Networks
    - ✓ Used GPU-accelerated python 3D CNN API to accomplish brain functional networks classification. **Publication in TBME**
  - Clustering using Deep Convolutional Autoencoder (CAE) obtained features
    - ✓ Used 3D deep CAE to extract brain network features for fine-granularity atlas construction. **Publication in Media**
  - Cross Modality Synthesis (From MRI to CT)
    - ✓ Used multi-view multi-channel Unet based deep nets to synthesize CT images from MRI images

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## SKILLS

Python, C, C++, Java, Matlab; Keras, Tensorflow, Theano; Hadoop, Spark; MySQL, Linux System Administrator, docker

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## RESEARCH and EXCHANGE EXPERIENCE

- Research Student (intern), Siemens Healthineers, Malvern PA.** 5.2017-8.2017
- **Summary:** Cross modality synthesis (MRI to CT) Using deep learning nets
- Research Assistant, Cortical Architecture Imaging and Discovery(CAID) Lab, UGA** 8. 2013-present
- **Summary:** neuroimaging related research using computer science techniques including machine learning, big data and deep learning
- Visiting Student, IDEA lab, UNC Chapel Hill** 6.2016-7.2016
- **Summary:** Group-wise registration for fMRI images
- Visiting Student, Biomedical Imaging and Analysis Joint Lab, NPU, China** 7.2015-8.2015
- **Summary:** Deep learning neural networks (Auto-encoder, RBM) for fMRI image decomposition

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## SELECTED PUBLICATIONS

- **Yu Zhao**, et al. *Media*, 2017, Vol 42, pp200-11. Constructing fine-granularity functional brain network atlases via deep CAE.
- **Yu Zhao**, et. al. *IEEE TBME*, 2017, Issue 99. Automatic Recognition of fMRI-derived Functional Networks using 3D CNN.
- **Yu Zhao**, et. al. *NeuroImage: Clinical*, 2016. vol.12, pp 23-33. Connectome-scale Group-wise Consistent Intrinsic Connectivity Networks Analysis in Autism Spectrum Disorder
- **Yu Zhao**, et. al. *ISBI*, 2017. Template-guided Functional Network Identification via Supervised Dictionary Learning
- Dehua Ren, **Yu Zhao**, et. al. *ISBI*, 2017. 3-D Functional Brain Network Classification using CNNs.
- **Yu Zhao**, et. al. *ISBI*, 2017. A Novel Framework for Groupwise Registration of fMRI Images based on Common Functional Nets.