Xi (Bill) Chen | Resume

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Graduate bioinformatician/biochemistian with Statistic MA certification completing the final year of a Ph.D degree. Passionate about Big Data, Machine Learning and AI research, with strong technical and interpersonal skills, adept at working in teams and successfully delivering projects. I was awarded **Microsoft Azure Research Funding** in 2016 and gained a **Grow with Google Challenge Scholarship** in 2018.I am a certified **SAS** programmer and certified **Deep Learning** and **Cuda** instructor.

Education

- **University of Kentucky** — **Kentucky**
  Ph.D. in Biochemistry (Bioinformatics), — *2013–Jan,2019*
- **University of Kentucky** — **Kentucky**
  Master (Certification) in Statistics — *2014–2017*

Technical Skills

- **Programming Languages:** CUDA, C++ (OK), R, Python3, SAS and Matlab (OK). Please refer to:
  - **Hackerrank:** `https://www.hackerrank.com/billchenxi`
  - **NVidia:** `https://nvidia.qwiklab.com/public_profiles/5521a192-c2e9-4899-9750-500959646159`
- **AI/DL/RL/ML Knowledge:** TensorFlow, PyTorch. Please refer to:
  - **Courser:** `https://www.coursera.org/user/902cbf6a236e768db1c185c96778971b`
- **Cloud Computing Skills:** AWS, Google Cloud (GCP), Shiny. Please refer to:
  - **GCP/AWS**: `https://qwiklabs.com/public_profiles/032b735c-3942-4f65-96e2-46bc821a884a`

Publication & Software & Packages & Talks

- Papers:
  - A Method to Facilitate Cancer Detection and Type Classification from Gene Expression Data using a Deep Autoencoder and Neural Network, *arXiv, Dec 2018* arXiv:1812.08674 (link)
  - Parallelized Interactive Machine Learning on Autonomous Vehicles, *NAECON Dec 2018* DOI: 10.1109/NAECON.2018.8556776 (link)
  - Deep Learning by Doing: The Nvidia Deep Learning Institute, *Journal of Computational Science Education, Dec 2018* DOI: 10.22369/issn.2153-4136/10/1/16 (link)
  - Pan-Cancer Epigenetic Biomarker Selection from Blood Sample Using SAS®, *MWSUG, Sep 2018* (link)
  - Automatic 13C Chemical Shift Reference Correction for Unassigned Protein NMR Spectra, *Journal of Biomolecular NMR, Aug 2018* DOI: 10.1007/s10858-018-0202-5 (link)
  - Finite Mixture-of-Gamma Distributions: Estimation, Inference, and Model-Based Clustering, *Advances in Data Analysis and Classification, Jan 2019*
- Package
  - BaMORC *CRAN, 2018* CRAN GitHUB
  - BMRBr *CRAN, 2017* CRAN GitHUB
- Workshop
  - CUDA Programing Workshop *(UK ACM 18)*
  - Deep Learning for Computer Vision Workshop *(UK ACM 19)*

Notable Projects

- **(Deep Learning) Deep Learning for Cancer Classification with Gene Expression Data:** *Deep learning approach to classifying cancer types. Data from NIH Cancer Data public repo, with 32 different cancer types. The model accuracy is more than 97% with 0.2% false positive/negative rates.*
- **(Reinforcement Learning) Parallelized Interactive Machine Learning on Autonomous Vehicles:** *Development of an interactive reinforcement learning pipeline for autonomous driving from a game simulation. The simulator is from Microsoft AirSim and driving environment is simulated from Unreal Engine.*
- **(App Prototyping/Dev) CatsHub App Entrepreneurship:** *Development of student-oriented phone application that simplifies student's life by providing a one-stop shopping service hub. The original idea was from the University of Kentucky student organization. We pitched and created prototype, and won venture reward.*

Previous Employment

- **Deep Learning Institute** **NVIDIA**
  University Ambassadors / Deep Learning Institute (DLI) Certified Instructor *2018–Present*

  Certified to teach Fundamentals of Computer Vision (CV), Fundamentals of Deep Learning for Multiple Data Types (MDT), and Fundamentals of Deep Learning for Natural Language Processing (NLP). Contents include: Cuda, Deep Learning, Neural Network, Image Classification, Object Detection, Image Segmentation, Word Generation, Image and Video Captioning, Text Classification, Text Translation, and etc..

  Technologies: Jupyter, Boulder, QwikLab, Tensor Flow, Cuda, PyTorch, Caffe2, Keras, etc.

- **Moseley Bioinformatics Lab** **Lexington KY**
  Graduate Research Assistant *2013–Present*

  Worked on construction of Protein NMR Reference Correction and Protein NMR Deuteration Level Detection frameworks. Designed and implemented corresponding software package (R) and web applications systems. Created R package 'BMRBr' for easy download and processing of BMRB files.

  Technologies: R, R Package, RStudio, Python, Shiny, Docker.

- **Prof. Derek S. Young, Dept. of Statistics, University of Kentucky** **Lexington KY**
  Research Collaborator *2016–Present*

  Worked on simulation for the Mix-Gamma Model with R. Work included generation of large amount of simulated data from gamma distributions, implementation of testing code, unit test, and preparation and design of submission shell code for HPC (High-performance Cluster).

  Technologies: SAS, R, R Package, HPC Management, Bash

Reward and Certification Highlights

- SIAM International Conference on Data Mining Dissertation Travel Award (2018)
- MWSUG Conference Paper Scholarship (2018)
- Grow with Google Challenge Scholarship (2017/18)
- SC18 Paper Scholarship (2018)
- SAS Certified Clinical Trials Programmer, Statistical Business Analyst, Advanced Programmer
- Deeplearn.ai Certification Series (Coursera)