Tian Gao

Email: tgaochn@gmail.com
Mobile: (402) 601-9410

Seeking 2021 Summer Intern: Software Engineer / Data Scientist / Machine Learning Engineer

EDUCATION

- **University of Nebraska - Lincoln** — Lincoln, NE
  Ph.D. in Computer Science, GPA: 3.896 — *Aug. 2016 - Dec. 2021 (expected)*
    - **Research Field**: Computer Vision, Image Processing, Machine Learning, Data Mining
    - **Related Courses**: Data Structure / Algorithm Design, Parallel Programming, Pattern Recognition
- **University of Science and Technology of China** — Hefei, China
  M.S. in Computational Mathematics — *Sept. 2009 - Jun. 2012*
- **AnHui University** — Hefei, China
  B.S. in Computational Mathematics, GPA: 3.62 — *Sept. 2005 - Jun. 2009*

EXPERIENCE

- **University of Nebraska - Lincoln** — Lincoln, NE
  Research Assistant — *Aug. 2016 - Present*
    - Headed the design and implementation of an end-to-end solution to plant traits extraction problems using imaging processing and computer vision algorithms
        * Closely cooperated with plant scientists and mechanical experts in customized design with rapid iteration
        * Developed imaging processing algorithms to extract traits from millions of images up to 30 TB
        * Deployed computer vision algorithms to achieve precise representation of plants in 3D space using Structure-from-Motion (SfM) and surface reconstruction
        * Created a web-based tool visualize and analyze the 3D structure of plants using three.js
    - Designed and deployed algorithms and online applications to solve scientific problems in cancer research
        * Implemented algorithms to identify patterns with statistical significance using cancer gene data
        * Built an interactive website for users to utilize the algorithms above using Tornado
    - <u>Utilized</u>: Python, Matlab, HTML, JavaScript, Git, C/C++

- **E-commerce China Dangdang Inc. (dangdang.com)** — Beijing, China
  Full-time Software Developing Engineer — *Jul. 2012 - Aug. 2014*
    - Led a team to prevent fraud by implementing machine learning algorithms on user purchasing records
        * Collected data and extracted traits from 30 million purchasing records using Hadoop
        * Implemented Logistic Regression models for fraud prediction
        * Optimized the accuracy of the generated model and detected up to 90% of fraud
    - Developed machine learning algorithms to improve product recommendation
        * Implemented Logistic Regression models on clicking data from 7 million users
        * Utilized A/B testing for evaluation and increased CTR(click-through-rate) by 20%
    - Designed software documentation and collaborated document writing/review
    - Collaborated monthly code review as a reviewer/reviewee actively
    - Won Best New Programmer Prize, 2012
    - <u>Utilized</u>: Python, HTML, SVN, Hadoop, SQL

SELECTED RESEARCH ARTICLES

- T.Gao, J.Sun, F.Zhu, et al., *Plant Event Detection from Time-Varying Point Clouds.*, Big Data, 2019
- J.Sandhu, F.Zhu, P.Paul, T.Gao, et al., *PI-Plat: a high-resolution image-based 3D reconstruction method to estimate growth dynamics of rice inflorescence traits*, Plant Methods, 2019
- T.Gao J.Shu, J.Cui, *A systematic approach to RNA-associated motif discovery*, BMC genomics, 2018

SKILLS

- Programming
    - **Expert**: Python, MATLAB, Linux Shell
    - **Advanced/intermediate**: JavaScript, HTML, CSS, C/C++, Java, SQL, Lua, R
- Tools: Latex, Hadoop, NumPy, SciPy, matplotlib, Tornado, three.js, Git, SVN, Vim, Docker, markdown