

Tianshu Huang

tianshu.io | linkedin.com/in/tianshuhuang/ | github.com/thetianshuhuang

tianshu.huang@utexas.edu
(979)229-4116

EDUCATION

- **University of Texas** Austin, TX
Electrical and Computer Engineering (Honors) | GPA: 3.96 *August 2017 - Present*
 - Relevant Courses:
 - Theory of Probability (Graduate) Real Analysis I, II
 - Geometric Foundations of Data Science (Graduate) Algorithms
 - Computer Architecture Linear Signals
 - In Progress:
 - Probability and Stochastic Processes (Graduate) Operating Systems
- **Texas A&M University** College Station, TX
Concurrent enrollment while in high school | GPA: 4.0 *January 2016 - May 2017*
 - Relevant Courses: Discrete Mathematics, Linear Algebra

WORK EXPERIENCE

- **Research Intern — Clustering Methodology** College Station, TX
Texas A&M University, Department of Statistics *June 2019 - Present*
 - Currently working on a review paper covering Bayesian Clustering
 - Implemented various two-level clustering algorithms including MFM (Miller & Harrison, 2018) and DPM (Neal, 2000) and split-merge samplers (Jain, Neal, 2004)
 - Full documentation of implemented algorithms can be found at github.com/thetianshuhuang/bmcc
 - Wrote Python package using Python C API (bmcc on PyPI) and R package
- **Research Intern — Exploratory Data Analysis** College Station, TX
Texas A&M University, Department of Construction Science *June 2019 - August 2019*
 - Developed cleaning procedure to identify many data entry errors
 - Analyzed bid item data for state-level road work projects across several states, and developed model to fit the data
 - Applied geostatistical analysis techniques to examine geospatial price correlation
 - Implemented IDW using CUDA for fast computation (especially during cross-validation)
- **Test Analysis Systems Consultant** Fremont, CA
SLD Laser *August 2018 - Present*
 - Created complete web app from scratch using Django and D3.js to create interactive visualizations of laser test data consisting of over 23,000 lines of code
 - Integrated tests from multiple stages of production to allow engineers to compare data vertically (along a single device's life cycle) and/or horizontally (between different devices)
 - Wrote interface using the Django ORM to map legacy databases with greatly varying design and layout without existing documentation of database structure
 - Designed backend authentication and token-based API authentication

PROJECTS

- **Region V Robotics** Austin, TX
UT IEEE RAS *September 2018 - April 2019*
 - Wrote perspective-based Computer Vision algorithm to recognize obstacles and targets and compute their distances
 - Designed autonomous navigation algorithm for multi-robot swarms; team received 3rd place
 - Design program architecture, coordinate implementation, and manage review of over 20 developers

SKILLS

- **Languages:** Python, C, C++, CUDA, R, Javascript, ARM Assembly, Java, Matlab, SQL, HTML, CSS, LaTeX, Verilog
- **Libraries and Frameworks:** Python C API, Rcpp, OpenCV, Django, Celery, D3.js, Node.js, Numpy, SK-Learn
- **Platforms:** Apache, Arduino, RabbitMQ, Git (Github, Self-hosted Gitlab), Subversion, Ubuntu, FreeBSD, Virtualbox, ESXi, MySQL / MariaDB / Sqlite, FreeRadius, Large-Scale Parallel Computing
- **Hardware:** Board design (EagleCAD), fabrication (OtherMill), and assembly; CAD (Solidworks, Sketchup); 3D Printing