

# Daniel(Chaofan) Tao

423 Towerview Dr., Durham, North Carolina

☎ (+1) 919-884-1590 | ✉ chaofan.tao@duke.edu | 📱 danieltao | 📧 chaofan daniel tao

## Education

### Duke University

Durham, NC

B.S OF COMPUTER SCIENCE (CS)

August, 2017-December, 2020

- GPA: 3.9/4.0
- Named to the Dean's List (top third in the school) every semester

## Skills

**Programming Languages** **Fluent:** Python, Java, Git, Perforce, Linux **Proficient:** JavaScript, C, Cpp, HTML, CSS  
English, Chinese

**Music and Sports** Piano, Basketball

## Experience

### Intersystems

Cambridge, MA

DATA PLATFORM DEVELOPMENT INTERN

May, 2019-August, 2019

- Working in the Core Development team on a project about **PMML** using ObjectScript
- Compared the IRIS PMML with standard JPMML with Java and Python, fixed numerous bugs in IRIS PMML
- Added functionality to support NN, SVM, Kmeans, Naive Bayes, Random Forest, etc. in IRIS PMML
- Added SQL and JSON support in IRIS PMML

### Duke Prediction Analysis Lab

Durham, NC

UNDERGRADUATE RESEARCH ASSISTANT

October, 2017-Present

- Researched the application of interpretable NN in medical area with the help of prof. **Cynthia Rudin**
- Published ***This Looks Like That: Deep Learning for Interpretable Image Recognition*** on arXiv
- Applied PpNet to analyze breast mammograms to give a self-explained diagnosis of breast cancer
- Used Tensorflow, Keras, Scikit-learn and Pytorch for the dataset of Breast Cancer, achieved **state-of-the-art** result

### Duke Information Initiative

Durham, NC

SOFTWARE DEVELOPER INTERN

May, 2018-August, 2018

- Built an **interactive web app** with Plotly to demonstrate and analyze datasets of single cell sequencing
- Built a pipeline to reduce dimension, cluster, and visualize single cell sequencing data
- Used TSNE, PCA, autoencoder, KMeans, and other deep learning clustering methods
- Achieved cluster accuracy of **76%** on testing dataset

## Projects

### <Router Simulator>

Durham, NC

C

April, 2019

- Built a virtual router using Routing Information Protocol (RIP). The router could perform tasks like ping, traceroute, etc.

### <Duke AI for Art Competition>

Durham, NC

PYTHON, PYTORCH

February, 2019

- Used Neural Style method to generate art works
- See <https://github.com/danieltao/DukeAIforArt> for some art pieces

## Courses

2019	<b>Machine Learning (Graduate Level)</b>	Duke
2019	<b>Database Systems</b>	Duke
2019	<b>Operating Systems</b>	Duke
2019	<b>Information and the Internet</b>	Duke
2018	<b>Data Structure and Algorithms</b>	Duke
2018	<b>Computer Architecture</b>	Duke