HongKun **Tian**

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Skills

Programming Languages

Python, Java, C/C++, C#, JavaScript, OCaml, MIPS Assembly Language, Bash, PostgreSQL

Libraries & Frameworks

scikit-learn, PyTorch, Matplotlib, NumPy, Pandas, .NET, React, Gatsby, HTML, CSS, Sass, Node.js

Tools & Platforms

Git, Netlify, Azure DevOps, LaTeX

Languages

English, French, Mandarin

Completed Courses

- Algorithms & Data Structures
- Applied Machine Learning
- Database Systems
- Discrete Structures
- Fundamentals of Computer Graphics
- Linear Algebra
- Numerical Computing
- Operating Systems
- Probability
- Programming Languages & Paradigms (functional programming)
- Software Design
- Statistics

Certifications

Machine Learning

by Stanford University on Coursera

Certificate earned on 04/09/2020

Computer Vision Nanodegree

on Udacity

Certificate earned on 04/21/2020

Experience

UMAknow — *Montreal, Canada*

Software Development Intern — *May 2020 – Ongoing*

C#, .NET, VISUAL STUDIO, SHAREPOINT, REACT, HTML5, CSS3, AZURE DEVOPS

- Implement responsive redesign of the homepage for Cloudockit using HTML and CSS.
- Build SharePoint WebPart and implement additional functionality using React and TypeScript.

Software Development Intern — *Jun. 2019 – Aug. 2019*

C#, .NET, VISUAL STUDIO, HTML5, CSS3, JAVASCRIPT, AZURE DEVOPS

- Developed a server-side REST API for Cloudockit, a cloud environment diagram generator for AWS, Azure and GCP, using .NET Framework, through which end consumers can trigger document generation.
- Built an interactive page using HTML, CSS, JavaScript through which end consumers can visualize and interact with the API's endpoints.
- Developed automated acceptance tests that detected irregularities and unwanted changes within template documents and generated documents using Aspose file management APIs, improving the robustness of code deployment.

Projects

Projects @ Udacity Computer Vision Nanodegree — *Mar. 2020 – Apr. 2020*

PYTHON, OPENCV, PYTORCH, MATPLOTLIB, SEABORN, NUMPY, PANDAS, NLTK

- **Project 1:** Performed image processing and created CNN using PyTorch to detect faces in an image and find facial keypoints.
- **Project 2:** Created complex deep learning model with a CNN encoder and a RNN decoder that produces rich, descriptive captions given an input image.
- **Project 3:** Implement a robust method for tracking an object over time with SLAM.

Projects @ McGill Applied Machine Learning — *Jan. 2020 – Apr. 2020*

PYTHON, PYTORCH, SCIKIT-LEARN, MATPLOTLIB, SEABORN, NUMPY, PANDAS

- **Project 1:** Implemented Logistic Regression and Naive Bayes to classify targets from datasets acquired from UCI Machine Learning Repository.
- **Project 2:** Investigated various multi-class classification models (Logistic Regression, Decision Tree, Support Vector Machine, AdaBoost, and Random Forest) on two textual datasets preprocessed through vectorization and TFIDF weighing.
- **Project 3:** Implemented Multilayer Perceptron and its backpropagation from scratch, and developed a CNN using PyTorch to classify image data

MindBook @ ConUHacks 2020 — *Jan. 2020*

REACT, CSS3, IBM TONE ANALYZER, NODE.JS, FIREBASE

Summary: Journal logging web app that performs sentiment analysis and provides recommended activities based on the predictions.

- Built the client-side UI using React and CSS.
- Hooked up Firebase to our Node.js backend to save journal entries from users.
- Implemented IBM Tone Analyzer API and business logic to provide suggestions to users.

TravelCC @ Hack The North 2019 — *Sep. 2019*

JAVA, FIREBASE API, XE CURRENCY DATA API

Summary: Automatic foreign currency conversions through a smartphone's camera.

- Implemented API calls to Firebase API and XE Currency Data API.

NLPure @ McGill CodeJam 2018 – First Place Overall — *Nov. 2018*

KERAS, SCIKIT-LEARN, REACT, NODE.JS

Summary: Text toxicity detection built using Keras.

Education

McGill University — *Montreal, Canada*

Bachelor of Science – Honours Computer Science — *Sep. 2018 – Exp. May 2022*

- Cumulative GPA: 3.73/4.00