

TIANSHENG SUN

Github: <https://github.com/tianshengs>
Linkedin: www.linkedin.com/in/tianshengsun/

Email: ts3348@columbia.edu
Tel: (+1)-802-771-5436

HIGHLIGHTS OF QUALIFICATIONS

Possess a wide range of internship and project experiences, including full-stack software development, User Interface Design, NLP, Computer Vision, Android development, and GIS analytics projects.

EDUCATION

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|--|---------------------------|
| Columbia University, New York City, USA <ul style="list-style-type: none">Master of Science in Computer Science GPA: 3.99/4.00 | Sept.2020-Dec.2021 |
| Middlebury College, Middlebury, USA <ul style="list-style-type: none">Bachelor of Arts in Computer Science & GeographyGPA: 3.80/4.00, Geography Major GPA: 3.70/4.00, CS Major GPA:3.85/4.00 | Sept.2016-May 2020 |

TECHNICAL PROFICIENCIES

Programming Languages: Java, Python, HTML/JavaScript/Ajax/CSS, R, Go,C++

Libraries: OpenCV, NumPy, ReactJS, d3.js, Redux, React Router, Bootstrap

Tools: Eclipse, Axure, Android Studio, Adobe Illustrator, RStudio, Postman, ArcMap, QGIS, SAGA, Webstorm, Google Earth

Framework: Flask, NodeJS

Others: PostgreSQL, Amazon Web Service, Google Cloud

PROFESSIONAL EXPERIENCE#

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| Amazon, AWS
Software Development Engineer Summer Intern <ul style="list-style-type: none">Migrate the current Device Farm console of Amazon Web Service to a new console based on ReactJS.Manage global state and information in no boiler plate Redux.Dreate custom-oriented User Interface using Polaris design patterns.Enable internationalization with i18next. | May 2021-Current
Seattle, USA |
| Columbia University
Computer Science Research Assistant <ul style="list-style-type: none">Design prototype of a new user interface using Figma for the Cross-Cultural Media Preference project which examines and displays the tagging and browsing preference of social media among different affinity groups.Conducted multiple rounds of user tests and A/B tests to examine better ways to design the user interface of the project.Implemented features using Flask framework with Bootstrap library based on user test results, such as a modified version to showcase relationship between two news and addition of drop down menus. | Sept.2020-Dec.2020
New York City, USA |
| Middlebury College
Computer Science Research Assistant <ul style="list-style-type: none">Championed the process of designing and optimizing the C++/OpenCV camera calibration section of the Middlebury Computer Vision Benchmark project, which is designed to utilize Aruco chessboards for estimating the camera system's intrinsic (such as focal length) and extrinsic (such as camera's relative position) parameters.Exceeded expectations in obtaining data for future use through gathering and capturing approximately 10 sets of images of various objects.Executed the project focused on designing a python program for establishing the SteamVR system while monitoring potential data for generating dataset images using the HTC VIVEtracker. | May 2019-Aug.2019
Middlebury, USA |
| SAP
Summer Intern <ul style="list-style-type: none">Provided strategic oversight for the unit tests development for analyzing and assessing the functionality of a web-based cash flow product utilizing ABAP language.Excelled in designing automation tests using START(with customer code) as well as executed +30 test cases for a web-based cash flow finance product. | Jun.2018-Aug.2018
Shanghai, China |
| Gravity Ideas
Summer Intern <ul style="list-style-type: none">Enhanced functional knowledge of customer's behavior in developing 2 website versions of Gravity Idea's website (A/B testing). | May 2017-Jul.2017
Cape Town, South Africa |

- Utilized SpaCy for administering the extraction and analysis of the psychological behavior of approximately 600 Twitter users of Gravity Ideas.
- Conceptualized and designed components of an Android application to better understand people's habitual path to work.

PROJECT EXPERIENCE

A Spanish Accent Conversion System (NLP)

Jan, 2021-Apr. 2021

- Designed a Spanish Automatic Speech Recognition System for Spanish that allows for forced alignment in Kaldi.
- Segment Spanish audios into phones using the forced alignment.
- Built and trained a phone-based encoder-decoder Spanish Accent Conversion model with CELP speech features extracted using Speex codex.

Tinnews: A Tinder-Like News Android APP

Jul.2020-Aug.2020

- Adhered with the Google Component Architectural MVVM Pattern in designing the Instagram Flavor News App.
- Implemented the JetPack navigation component for integrating the bottom bar and page navigation.
- Supported the swipe gestures for liking/disliking the news utilizing Mindork's Place Holder View.
- Employed the use of the Live Data & View Model for developing the Room Database to support a local cache and offline model.
- Pioneered the integration of the Retrofit and Rxjava for generating the latest news data from a RESTFUL endpoint (newsapi.org).

Around: A Cloud and React-based Social Network

Jun.2020-Jul.2020

Front & Back End Development

- Spearheaded the design and launch of a geo-based social network web application with React JS.
- Provided user support in creating and browsing posts as well as searching nearby posts using Ant Design, GeoLocation API and Google Map API for implementing various features.
- Optimized the authentication using token-based registration/login/logout flow with React Router v4 and server-side user authentication with JWT.
- Handled and deployed posts to Google Cloud (Google Kubernetes Engine) by launching a scalable web service in Go.
- Facilitated geo-location-based search functions to enable users to search nearby posts within a distance (e.g., 200km) using and deploying ElasticSearch to GCE.
- Structured and integrated a face detection model with the Go service using Google Vision API.

JOB+: AWS Based Web Service Development – Job Recommendation

May 2020-Jun.2020

Front & Back End Development

- Headed the design of a web page for users to search for job positions using HTML, CSS, JavaScript, and AJAX.
- Generated favorite records to provide personalized position recommendation.
- Handled HTTP requests through designing 3 Java servlets with RESTful APIs.
- Extracted keywords from position descriptions using the MonkeyLearn API.
- Accomplished in implementing job recommendation by designing content-based recommendation algorithm.
- Maximized performance rate through deployment to Amazon.

New York Travel Planner: A Smart Travel Website providing customized travel plans

Aug.2020-Sep.2020

Front End Development

- Championed the design of map component using ReactJS and specifically react-google-map library.
- Designed markers of all places of interests with pop-up descriptions and routes displayed on the map.
- Combined the map component with the search and plan generator components for better user friendliness.

Starlink: React JS based Starlink Trajectory Visualization

Dec.2019-Jan.2020

- Designed and developed a visualization dashboard using ReactJS and D3 to track satellites in real-time based on geo-location.
- Built location, altitude, and duration based selector to refine satellite search.
- Animated selected satellite paths on a world map using D3 to improve the user friendliness.

Distribution of Hostels and Their Accessibility To Restaurants In Dar Es Salaam

Nov.2019

- Completed the project focused on using SQL queries in QGIS to evaluate the spatial distribution of hotels and their accessibility to the number of restaurants within 500-meter buffer using OpenStreet Map data.
- Visualized the final analysis results through developing a Leaflet Map.

Niger River – The Mother River of West Africa

May 2019

- Oversaw the design of a thematic map of the geographic and cultural importance of Niger River in both modern and historical times using Adobe Illustrator.
- Administered the collection of shapefile geographic data from Natural Earth, Deltas at Risk, Protected Planet, and DIVA-DIS and compiled in ArcMap.