Tianyi Zheng

tianyizheng.github.io

Email : tzheng32@gatech.edu
Mobile : +1-404-788-9773

Skills

- **Coding**: Python, C/C++, Java, Swift, Matlab, Javascript, Shell, HTML5, CSS, SQL
- **Frameworks/Tools**: Flask, Django, Spring, iOS, XCode, Postgres, MongoDB, React Native, AWS EC2/S3, Azure, Hadoop, Unix, Linux, Windows, Docker

Projects

- **Trailblazer - Graph Based Path Finding and Recommendation System**
  Recommending Interesting Hiking Trails (in Python)
  - **Algorithm**: Developed a priority-based graph algorithm for fast selective node traversal. Using a modified Dijkstra algorithm, nodes were prioritized based on number of points-of-interest in the proximity.
  - **WebApp**: Built application with Django, MongoDB on AWS, and DjangoREST to communicate with a React frontend using Rest-APIs. User inputs desired trail type and the backend calculates the most interesting trails in user's area, streamlining the entire process.
- **Faceology - Facial Detection and Recognition on iOS**
  Using Vision to Help Users Navigate Networking Events (in Swift)
  - **UI**: Designed and developed an intuitive UI for user sign in, facial detections and profile information displays using Xcode's storyboard.
  - **Detection**: Built facial detection on iOS using built in camera and Vision framework that locates and sends encoded facial landmark features to a Flask backend for further one-hot facial matching and recognition.
  - **LinkedIn**: Utilized the LinkedIn framework for OAuth sign in and profile information retrieval.
- **FhirNet - Patient Mortality Prediction System for Physicians**
  Making Predictions Based On EHR Records (in Python)
  - **WebApp**: Developed a Flask backend that locates patient EHR records using FHIR, an open RESTful API specification. Extrapolates, structures and translate medical codes between different standards by correlating records on another Postgres database.
  - **Prediction**: Using a modified state-of-the-art deep neural net model, the backend feeds in structured patient records and produces interpretable predictions.

Education

- **Georgia Institute of Technology** — Atlanta, GA
  Master of Science in Mechanical Engineering; GPA: 4.00 — *Aug. 2017 – May. 2019*
  Concentration in ***Computer Science***
- **Georgia Institute of Technology** — Atlanta, GA
  Bachelor of Science in Mechanical Engineering; GPA: 3.72 — *Aug. 2013 – May. 2017*
  Concentration in Automation and Robotics
- **Courses**: Data Structure, Algorithm, OOP, Objects and Design, User Interface Design, Computational Prob Solv, Data & Visual Analytics, Info Security, Enterprise Computing, Health Informatics

Experience

- **Muyu Technology** — Beijing, China
  Lead Mechanical Intern — *Summer. 2017*
  - **Startup**: Muyu is an early stage startup company developing novel water-saving taps.
  - **Leadership**: Led 4 other interns in prototype design, building and testing in an agile environment.
  - **Communications**: Person of contact to manufacturers and suppliers for projects in charged.
- **Georgia Institute of Technology - Sulcheck Lab** — Atlanta, GA
  Research Assistant — *Summer. 2015, 2016*
  - **Automation**: Research on data analysis and motion control for an Atomic Force Microscope to achieve stable movements over long-period of time. Streamlined data collection and analysis with automation Scripts. Redesigned autonomous motion control and improved accuracy.