Yuan Fang

Software engineer
Apex, NC, 27523|(919)-561-4480| yuanfang0818@gmail.com|LinkedIn

SKILLS:

Programming languages: Java, Python, JavaScript, HTML, CSS, SQL, JSON, YAML.
Software/Platform/IDE: AWS (Certified SAA, Certified DVA), GCP, Vue, React, Spring, Maven, CloudFormation, Terraform, CI/CD, Docker, Linux/Windows/macOS environment.

PROFESSIONAL EXPERIENCE:

Staff Engineer/ Cloud Software Engineer, *American Family Insurance* *Nov/2019- current*

- Cloud engineering and consulting:
  - Designed and implemented Cloud infrastructure patterns/templates (e.g. AWS batch, S3 pre-signed URL, etc), that meet the security compliance, non-functional requirements of the enterprise.
  - Implemented tools that **(1)** auto remediates the security vulnerability of EC2 instances **(2)** reduces the cost of running servers in the sandbox by stopping them out of office hours automatically.
  - Wrote customized rules (Python) and automated tests for IAC (infrastructure as code) validation utility.
- Fullstack development for a queue management tool:
  Front-end:
  - Developed the front-end UI (SPA) for the Amazon MQ message management microservice.
  - Integrated it with Okta authorization and authentication.
  - Designed the infrastructure (AWS CloudFormation) and deployed it to AWS (S3, Cloudfront) using Gitlab CI.

  Back-end:
  - Implemented functions for auditing on message operations, endpoints of RESTful API (Jave Spring).

Working Environment: Python, Java, Javascript, YAML, JSON, Spring, Vue, Maven, Docker, AWS, Gitlab CI/CD.

Software Engineer Intern, *Mingxin Software Technology* *Sep/2018-May/2019*

- Built an Artificial Intelligence aided diagnosis mobile application with Spring Boot to serve thousands of users with low cost and reliable disease screening services:
  - Implemented a function for image segmentation with clustering methods (Fuzzy c mean & K means).
  - Performed data cleaning and analysis. Wrote SQL queries to fetch data from the PostgreSQL database.
  - Improved the accuracy of the SVM classifier by 12% by extracting new features from the objects.
  - Recognized color and texture features of patients' tongues and generate the diagnostic reports with machine learning algorithms and convolutional neural network (Inception V4) on TensorFlow.

Working Environment: Python, Java, Spring, PostgreSQL, TensorFlow

Postdoctoral Fellow (GIS), *NCSU/USDA Forest Service* *Jan/2018-Aug/2018*

- Simulated and visualized landcover change and air quality impacts on human health using the BenMAP model.
- Implemented a tool for database standardization (e.g. reclassification, interpolation, raster data conversion) and introduced automation tools that reduced redundancy and enhanced the entire workflow. (publication).

Working Environment: Python, R, ArcGIS

Research Assistant (GIS), *NCSU Department of FER* *May/2011 -Dec/2017*

- Designed and implemented a water balance model with spatial datasets. Created and managed databases. Explored the relationship between environmental controls globally (publications:1, 2).

Working Environment: Python, R, Fortran, ArcGIS, Access

EDUCATION:

M.S. in **Computer Science** - *Georgia Institute of Technology* *expected May/2022*
Ph.D. in **Forestry** - *North Carolina State University* *Aug/2017*
M.S. in **Natural Resources GIS** - *North Carolina State University* *Jul/2012*
B.S. in **Ecology -** *Anhui Agricultural University* *Jun/2010*