

# Yuan Fang

Software engineer

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## 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.

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## 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 generated 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

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## 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