

# Bingxuan (Ethan) Ying

GitHub: <https://github.com/bingxuanying>

Phone: (530)760-9030

Email: [yingbingxuan@gmail.com](mailto:yingbingxuan@gmail.com)

Address: Bellevue, WA

LinkedIn: <https://www.linkedin.com/in/bingxuanying>

## EXPERIENCE

### Amazon

Seattle, WA

*Software Developer Engineer II, Global Engineering Service*

*Sep 2021 - Present*

- Led High-Level Design of one entire phase of the next AWS service product, Nazir.
- Owned High-Level Design and end-to-end development of 3 backend services running on ECS with Fargate and Lambda.
- Directed 6 software engineers and mentored 4 interns as an acting senior and service owner.
- Reduced service major APIs (TPM 20k) latency from 8 seconds to 0.2 seconds by implementing warm start, static initialization, tiered compilation, memory increase, client connection configuration, and request priming.
- Enabled full CICD pipelines and implemented automated Integration Tests, Latency Tests, Load Tests, and Bake Time.
- Pioneered monitoring stack with metrics and alarms to enable consistent monitoring of all service performance and health.
- Launched site-wide feature - external access for EinSight and led the InfoSec Certificate review.

### University of California, Davis

Davis, CA

*Technical Lead, Biological and Agricultural Department*

*Jan 2018 – Sep 2021*

- Collaborated with Deputy Secretary of USDA as Technical Lead for a team of 6 to build USDA funded project to achieve early detection of insect infestations in large-scale food storages.
- Built a Node web service to manage data and deployed it with Nginx and Docker on Linux servers.
- Implemented image processing algorithms with 95% accuracy rate and improved efficiency by 1000% with parallelism.
- Utilized Spark, AWS, and S3 to clean/format over 10TB of data.
- Developed web and mobile applications using ReactJS with Redux serving 10k+ monthly active user.

### Shanghai Huace Navigation Technology LTD

Shanghai, China

*Software Development Engineer Intern, Drone Department*

*Jun 2018 – Sep 2018*

- Collaborated in a team of 10 responsible for developing the service with Flask to manage drone flight log and data.
- Architected three applications for drone system web portal serving 10k+ monthly active users.
- Established point cloud of landform captured by drones and convert it to 3D Model using Pix4D.
- Implemented reCAPTCHA, CSRF token, and user input validation to enhance system security.

## EDUCATION

### Vanderbilt University

*May 2022*

M.S. in Computer Science, GPA: 3.67/4.0

### University of California, Davis

*Jun 2019*

B.S. in Computer Engineering, GPA: 3.42/4.0

## SKILLS AND KNOWLEDGE

**Programming Languages:** Java, Python, C/C++, JavaScript/TypeScript, Rust, Bash, HTML/CSS

**Infrastructure:** Kafka, Zookeeper, ZeroMQ, Kubernetes, Docker, NginX, AWS API GW, EC2, ECS, Lambda, SQS, SNS, etc.

**Database:** DynamoDB, DocumentDB/MongoDB, S3, Neptune, MySQL, Redis, MemCache, CouchDB, HDFS

**Web Development:** Spring Boot, Spring WebFlux, Dagger, Smithy, Flask, NodeJS, ReactJS/React-Native/Redux

**Data:** ETL, Spark, Flink, Hadoop, AWS AppFlow, Glue, Athena

## PROJECTS

**ResourceAllocator** (<https://github.com/bingxuanying/resource-allocator>)

*Apr 2022*

- Built a multi-method AI that plans and models trading and development decisions for respective virtual countries, each country with virtual resources and incentives for cooperating and competing with other countries.
- Implemented A Star search algorithm and Discounted Reward algorithm to find the most optimal solutions.
- Adopted pruning strategy to construct graph and child paths with great performance.

**DuFu** (<https://github.com/bingxuanying/DuFu>)

*Apr 2021*

- Developed a Pub/Sub application with both P2P and broker strategies implemented for real-time stock price monitor.
- Built upon ZeroMQ middleware with support for QoS properties including ownership strength and data history record.
- Adopted Zookeeper for service discovery, leader election, load balancing, and information management.
- Utilized GitHub Actions to implement automated testing on application and Mininet for running network-wide tests.