YANG WANG

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196 Tiber Way ⋄ St Charles, MO 63301

EDUCATION

Purdue University, West Lafayette   Aug. 2015 – Jun. 2021
Ph.D. in Electrical Engineering
Thesis: Design and Implementations of Open-Source Ag IoT Devices
for Farm Machinery Data Acquisition and Integrated Analytics

Purdue University, West Lafayette   Aug. 2010 – Dec. 2014
B.S. in Electrical Engineering

EXPERIENCE

The Climate Corporation   Nov. 2022 – Present
Senior Data Scientist   *St Louis, MO*

· Led the development of a Python package (shapely, geopandas, and sklearn) that transformed a geospatial vector data into an aggregated form using the Connected Components algorithm. The algorithm provided up to 10x data size reduction with minimal loss of fidelity.
· Co-lead the development of a Python package that converts OEM Shapefiles for deprecating an existing service. Contributed to the integration of this package into an AWS SQS service. Also created Datadog dashboard and alerts for error tracking and alerts. The new package boosted conversion success rate from 50% to 95% when comparing to an existing package.

John Deere Intelligent Solutions Group   Jul. 2021 – Oct. 2022
Senior Navigation Engineer   *Torrance, CA*

· Refactored codebases and implemented bug fixes for GNSS receiver (StarFire) firmware. Gained professional experience in C++ and the maths behind precise positioning technology.

Purdue University   Aug. 2015 – Jun. 2021
Graduate Research / Teaching Assistant   *West Lafayette, IN*

· Processed GNSS tracks from ag machinery with Kalman filtering (Interacting Multiple Models) and spatiotemporal clustering algorithms for track classification and harvest productivity analyses across multiple years and machines.
· Performed extensive reverse-engineering and lexical analyses on CAN/ISOBUS messages from ag equipment.
· Architected and built 10+ telematic units (ISOBlue 2) for automatic CAN, GNSS, and video data collection for ag machinery. Deployed these units in 3 different US states and in Netherland through in-person or remote coordinations with farmers and machine operators.

Spensa Technologies Inc. (Acquired by DTN)   Jan. 2015 – May. 2015
Embedded Systems Engineer   *West Lafayette, IN*

· Implemented embedded firmware and assisted with PCB layout for new base station launch.

CORE COMPETENCIES

Programming Languages	Python, C, C++, MATLAB, Shell scripting, LaTeX, Java, Javascript
Cloud & Containerization	AWS and GCP (both with limited proficiency), Docker
Parallel Processing	PySpark
Embedded Systems	Yocto Linux, Android, ISOBUS VT
Network & Messaging Protocols	CAN, J1939, ISOBUS, MQTT, Apache Kafka
Databases	MySQL, TimescaleDB, DuckDB
Observability	Datadog, OpenSearch, Splunk
Version Control Systems	Git, Team Foundation Server
Languages	English and Mandarin (both fluent), French (limited proficiency)