Bin Wang

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Education

Shanghai Jiao Tong University Shanghai, China
M.Eng. in Electronic Engineering *Sept. 2019 - Mar. 2022*
- Supervisor: Prof. Kaizhi Wang
- Department: RadarTech Research Laboratory of SEIEE
- Research Direction: Radar Signal Processing

Southwest University Chongqing, China
B.Eng. in Communication Engineering *Sept. 2014 - Jul. 2018*
- Supervisor: Prof. Xing He
- Department: Nonlinear Circuit Research Laboratory of CEIE
- Research Direction: Digital Image Processing

Publications

Detection of Small Targets Based on Dual-Receive Channels Radar
Signal Processing*, *Small Target *2021*
- **Bin Wang**, Jie Li, Jinzhi Liu, Kaizhi Wang
- 2021 IEEE International Geoscience and Remote Sensing Symposium IGARSS

A MULTI-LEVEL FEATURES FUSION NETWORK FOR SAR SHIP SEGMENTATION
Detection*, *CNN *2022*
- Han Qu, **Bin Wang**, Chenguang Yang, Kaizhi Wang
- 2022 IEEE International Geoscience and Remote Sensing Symposium IGARSS

Patents

Method of Dividing Frequency Bands to Improve Time Resolution
Shanghai Jiao Tong University *2021*
- **Bin Wang**, Kaizhi Wang

Frequency Modulated Continuous Wave Model of being Symmetrical in Frequency Domain
Shanghai Jiao Tong University *2021*
- **Bin Wang**, Kaizhi Wang

Key Academic Projects

Detection of High-Speed and High-Mobility Tiny Targets Based on Multistatic Radar
Advisor: Prof. Kaizhi Wang, Shanghai Jiao Tong University *Sept. 2019 - Nov. 2021*
- Design a frequency modulated continuous wave model of being symmetrical in frequency domain in order to avoid the shortcoming in traditional FMCW signals of low time resolution.
- Propose an object detection algorithm with multi-period signals based on designed signal model which realizes the acquisition of multi-dimensional motion information of the target, such as speed, distance, and altitude.
- Using the method of dividing frequency bands to improve time resolution, which achieves a significant increase in time resolution in exchange with large bandwidth.
- Design a complete radar system (including the generation, acquisition processing of signal) and determine the specific system parameters according to the detection requirements.

Honors and Awards

- Second Class Scholarship of Shanghai Jiao Tong University, Shanghai Jiao Tong University *2020*
- Third Class Scholarship, Southwest University *2016*
- Advanced Individual in Social Event Activities, Southwest University *2016*

Experience

Intel Asia Pacific Research And Development Ltd.

Cloud Software Development Engineer *May. 2022 - present*

- Automate deployment, configuration, and management of components, including TeamCity, Jenkins, Kubernetes and docker.
- Develop and maintain CI pipelines for continuous integration and delivery of software and configurations which used to manage BIOS developments and tests.
- Drive continual improvements for availability, performance, observability, quality, and cost-efficiency of RD hardware resources.
- Collaborate with software development teams to integrate automated testing and quality assurance processes into the deployment pipeline.

Key Work Projects

Pipe Line Usage in Task Orchestration[PLUTO]

Tech Stack: FastAPl, MySQL, MongoDB, Redis, Docker, Jenkins, RabbitMQ *Jul. 2022 - present*

- Developed backend APls using FastAPI to handle and store frontend request data. Leveraged MongoDB for preprocessing MySQL data, significantly enhancing frontend API access speed.
- Utilized Docker for containerized deployment and implemented CI/CD processes, greatly simplifying the management of development and production environments.
- Managed numerous Jenkins jobs through CasC, significantly simplifying maintenance tasks.
- Implemented message passing between microservices using RabbitMQ, driving state machine transitions and enhancing microservices' concurrency and stability.

Firmware and Simics Probe

Tech Stack: FastAPI, MySQL, Groovy, Angular, RabbitMQ *Dec. 2023 - present*

- Developed backend tasks with FastAPl to listen to RabbitMQ, process and store event-related parameters in real-time, parse file data, and store it in MySQL. Created backend APIs with FastAPl to quickly respond to frontend data requests.
- Implemented a bisection algorithm using Groovy for BIOS version and Simics version integration tests to identify the earliest BIOS version causing test case failures.
- Developed a simple frontend dashboard with Angular to display test results and manage test case selection criteria.

Technical Strengths

- **Programming Languages:** Python, C/C++, Matlab, JavaScipt, Groovy
- **Development Tools:** Git, CMake, Docker, MySQL, MongoDB, TeamCity, Jenkins, Angular, Jira, Redis
- **Writing Tools:** LaTeX, Markdown