Biguo Xin - Full stack egineer

I'm a self-motivated man who loves very much **about** programming.

I do always learn **before** I invent so **that my** colleagues don't have **to** deal **with** "genius" code.

Programming skills are like wands **for** wizards, they can help build many amazing things **in** a fantastic way. But unlike magic, programming **is about** simplicity, readability.

And **that**'s what I do, build awesome(hopefully) things **with** simple readable code.

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Education

Heilongjiang University Math Bachelor 2010-2015

Experiences

1. Frontend engineer in HangbanGuanjia for 16 months.

   - A single page web application based on Mithril framework

   Including routers, **state** management, session restore, complicated user-interactive components.

   - Maintenance of the company's Gitlab and Gitlab CIs

   Including docker related problems debug, Gitlab upgrading, moving issues.

- Express & Node.js based backend for rendering pages and API rerouting

Including request tracing, request caching, javascript and CSS packing.

Supporting dynamic **module** loading from the browser, typescript transpile.

2. Backend engineer in YueRanXinDong 7 months ago till now.

- Express & Node.js based API server for Neon, Meetstar, and other Apps

Other than above, there **is** long **async** flow managing, composition **with** golang, python.

Interactive **with** DynamoDB **with** node.

Deploying **with lambda**, ELB, **and** containers.

- Gin & Golang based API server for a Tinder-like App

API **routing** with Gin.

Interactive with Postgres **and** DynamoDB, query **and** calculate GEO information with PostGIS.

Building **and** delivering golang applications automatically with Jenkins.

- Maintenance of AWS dynamoDB, RDS, Lambda, EC2, Kenisis etc.

3. Research Engineer in Big data institution of Wuhan University till now

- Neo4j, gstore, MySQL based billion level document analysis and visualize system

Using Rust as **backend and** all the graph algorithms, wasm, **and** zoomcharts for frontend

- CNN based image classification

Mainly **just** stack convolution layers **and** pooling layers.
Solves **brain** tumor **diagnosis** which is **just** a **binary** classification problem.
Tring to detect tumor with YOLO, still working.

4. CTO in Chenwu Tech.

- tox and rust based distributed communication system

Impl tox based p2p communication **system**.

- tokio and rust based communication framework

The framework **is** divided **into** frame layer, codec layer **and** router layer.
The frame layer **is** built **on** top **of the** bluetooth protocol **and** audio protocol.

- bert based entity and event extraction

Prepare the data, **build and** train the model.

- resnet50 based smoke detection

Prepare the data, **build and** train the model.

5. [Deeper network (https://shop.deeper.network/)](https://shop.deeper.network/) Full stack engineer / Tech lead since 2021-10

    - [Helium (https://www.helium.com/)](https://www.helium.com/) project lead (Erlang)

Optimize helium node signal, **network** transmission, block synchronization etc.

    - Rustdesk remote desktop relay server (Bash)

Use wireguard **to** provide relay services **for** rustdesk remote desktop software.
Support 1000+ concurrent **users** on a single server.

    - Transparent proxy server (Golang)

https/http **transparent** proxy, support tls decryption, traffic forwarding, **content** filtering, **content** modification, built-**in** JavaScript engine, support surge module

    - Deeper machine a distributed edge computing platform (Rust)

Implement EVM-**based** smart contract **scheduling,** task **distribution,** node management **and** other functions
Implement edge computing nodes **based** on docker

    - [Deeper network VPN (https://dpn.deeper.network/)](https://dpn.deeper.network/)(Golang)

iOS/Android/MacOS/Windows/Linux cross-platform VPN clients
gvisor-based traffic interception **and** relay center
clash-like rule engine **and** traffic forwarding mechanism
tunnel based **DNS** resolution **to** prevent **DNS** pollution
NAT traversal based P2P communication tunnel, UDP/TCP multi-protocol support
transparent **proxy** support **for** ad blocking **and** content filtering

    - [Deeper GPT (https://chat.deeper.network/)](https://chat.deeper.network/)(Python)

RAG based knowledge Q&A system, implement document chunking, vectorized storage, vector retrieval, LLM Q&A **and** other functions
Automatically import **customer service** chat records into the knowledge base **for** Q&A

Part-time projects

- [HelloGithub2zhihu (https://github.com/FrontMage/HelloGithub2zhihu)](https://github.com/FrontMage/HelloGithub2zhihu) puppeteer based automation script

automatically **sync** starred github repos **to** zhihu **as** articles

- [wowAutoFishing (https://github.com/FrontMage/wowAutoFishing)](https://github.com/FrontMage/wowAutoFishing) OpenCV and pyaudio based World of Warcraft auto fishing script

automatically fish in World of Warcraft **by** recognizing **bobber** splash sound **and bobber** position

- [fishpond (https://github.com/FrontMage/fishpond)](https://github.com/FrontMage/fishpond) Python and web wechat based chat assistant

message sentiment analysis, auto reply, **message** statistics etc.

- [gesutre (https://github.com/FrontMage/gesture)](https://github.com/FrontMage/gesture) OpenCV and Python based gesture recognition

hand gesture recognition to **control mouse move**, click, zoom etc.

- [xinge push golang lib (https://github.com/FrontMage/xinge)](https://github.com/FrontMage/xinge) Golang lib for Tencent Xinge push, adopted by Tencent officially

Golang **lib for Tencent Xinge push**, **adopted by Tencent officially**

- [rock blog (https://github.com/FrontMage/rock)](https://github.com/FrontMage/rock) Rust based blog system, both frontend and backend are in Rust

A blog **system** with both frontend **and** backend written **in** Rust, frontend uses rust+wasm, backend uses actix-web

- [pm (https://github.com/FrontMage/pm)](https://github.com/FrontMage/pm) Process manager, similar to pm2

A process manager for **node and** other applications, similar to pm2, but **in** Golang

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Skills

- HTML/CSS/SCSS Layout and styling pack

HTML5 semantic tags, CSS3 flexbox **and** grid layout, **SCSS** variables **and** mixins.

- Javascript in browsers

Expert in vanilla **JavaScript,** DOM manipulation, event handling, AJAX, Fetch API.

Familiar with React, Vue.**js,** Mithril **and** other frontend frameworks.
Understanding of web assembly, asm.**js, and browser** performance optimization.

- Javascript in Node.js(Quiet different)

Familiar **with** Express, Koa, NestJS frameworks.

Understanding **of asynchronous** programming, **event loop**, **and performance** optimization **in** Node.js.

- Golang

Familiar with Gin, Echo frameworks.

Understanding of goroutines, channels, **and** concurrency patterns **in** Go.

Familiar with Docker **and** Kubernetes **for** containerization **and** orchestration.

Familiar with AWS services like EC2, S3, Lambda **for** cloud deployments.

Familiar with database interactions using GORM **and** sqlx.

Expert **in** low-level **network** programming using net package. Including TCP/UDP socket programming, TLS/SSL encryption, HTTP/2 protocol.

Expert **in** cross-platform development using Go. Including file **system** operations, process management, signal handling, **and system** calls. Including mobile development with gomobile.

Expert **in** performance optimization **and** profiling **in** Go. Including CPU **and** memory profiling, garbage collection tuning, **and** benchmarking.

- Rust

Familiar **with** Actix-web, Rocket frameworks.

Familiar **with** Tokio **async** runtime **and async**/**await** syntax.

Familiar **with** EVM blockchain development **using** Parity Substrate.

Familiar **with** WebAssembly development **using** wasm-bindgen **and** wasm-pack.

Familiar **with** encryption **and** hashing **using** RustCrypto **and** ring crates.

- Transformers

Familiar **with** Huggingface transformers **library**

Familiar **with** BERT, GPT, T5 **and** other transformer architectures

Familiar **with data** preprocessing **and** augmentation

Familiar **with model** training, fine-tuning **and** evaluation

- Rust
- Python
- Reason
- Julia
- Golang
- TypeScript

Age

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