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Overview

Name	Gender	Age	Phone Number	Email Address
Haiyang Li	Male	23	+86 15202355061	hyan23lee@hotmail.com

Academic Degree	Year of Graduation	Job Intention	GitHub	Blog
Bachelor of Computer Science	2019	Software Engineer	@hyan23	Hyan Lee

Profile

- I’ m a self-driven, enthusiastic, responsible person. I like challenge, tend to pursue perfection;
- I’ m a good learner, I learn new stuff on a daily basis. When I stepped into my current position, I spent only one week to study the C# language before I was able to use it, other things I learned afterwards include Azure DevOps, Power BI, OpenCV, TypeScript, etc.;
- Started programming in 2013, yielded a total of 200k lines of code;
- I can build relatively complex software. In my sophomore year, I wrote a toy Operating System running on x86 architecture from scratch, with its only dependency — an assembler called NASM. This Operating System is quite demonstrative, quite a few Operating System concepts such as multi-tasking, can be found in its kernel. For more details, refer to Projects section;
- I can build reliable software, because I code carefully, reason every piece of code I typed, at times my code succeeds the first shot. cnes is an emulator for the prevailing game console NES in the 90’ s, the biggest challenge of this kind of software is that you must simulate every characteristic of every chip on its motherboard as precisely as possible, as game intentionally or not intentionally relies on a feature that you might have not realized its importance. My emulator can run most of the old games, refer to Projects for more information.

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Programming Languages

I can build software or resolve problems using following programming languages, I grouped them into 3 separate groups as per my proficiency.

Proficiency	How often do I rely on the language documentation / specification	Language(s)
Good Proficiency	Rarely	C, Assembly, C#, Java
About Average	Sometimes I’ ll need API reference for specific calls	C ++, JavaScript, TypeScript
Poor Proficiency	Rarely not	Python, GO, SQL

▶ Other programming related skills include: (click to expand, not for PDF version)

Projects

Project Name	Time Span	Description	Screenshot(s)
tree	2016.04 - 2016.08	A toy multi-tasking, GUI Operating System built from scratch, it is written purely in 32-bit Assembly language and targeted Intel IA-32 architecture. It provides memory allocation / de-allocation, dynamic linking, system calls, a graphics library, task management, window management / event mechanism, a keyboard driver, and a mouse driver. Executables are extension’ d with `.bin`, and can be authored and compiled on other system which runs NASM	
cnes	2017.10 - 2018.06	A Nintendo NES/FC emulator to support my undergraduate thesis, built upon C and SDL1.2. Theoretically, 80% of the original cartridge games can be emulated and played with this emulator. In addition, I implemented a bunch of advanced features that commercial emulators commonly have, e.g., snapshot, USB gamestick support, stereo audio, APU visualization, key mappings. Other features were planned, include speed control, cheating, post processing, screenshot, game library (GUI), crossing platforms	  
8086asm	2016.10 - Now	An essential Assembly function library targeted 8086 processor, inspired by Ivrine32 Library, consists of modules like I/O, strings, arithmetic, files, system, utility, macro library. User can use more than 90 reliable, concise functions to develop 16-bit Assembly application conveniently. User’ s manual is available here	 
TypeScript 中文手册	2019.11 - Now	Chinese translation of the TypeScript Handbook, they actually provide official Chinese version, I translated it as a practice, my version consists of 75k Chinese characters	 

Working Experience

vendor `SDE I` at Microsoft

I have been working as a vendor `SDE I` at Microsoft from Nov., 2018 till now. During my time of service, I mainly focused on following projects; beside these, I also documented some other products.

Project	Description	Duties	Outcome	Related Material(s)
End to End Protocol Doc Publishing Dashboard	The dashboard monitors the protocol doc publishing workflow of docs.microsoft.com and creates several kinds of charts to reveal what’s going on between phase to phase, therefore errors such as omission, inconsistency can be found and corrected before they go to production	I wrote two tools to gather some of the required telemetry data from multiple sources twice a day, used SCOPE query language (Microsoft internal) to process the data, and Power BI to visualize them for end users	It has been running for more than half a year without breakdown	N/A
NuGet packages	**DevOpsClient**, Azure DevOps work item tracking SDK, it can be used like an ORM framework; **CvToolBox**, scale / rotation / perspective (slight) invariant template matching; **WindowsDriverWrapper**, Appium.WebDriver wrapper, make it Windows specific and easy to automate things	Author	Other team members are taking advantages from these packages, too