Jinbin Bai

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Education

- **Nanjing University** — Aug. 2017 – July. 2021
  B.S. in Computer Science, GPA 4.48/5.0, rank 19/173 — *Jiangsu, China*
- **Shanghai Jiao Tong University** — Jan. 2020 – May. 2020
  University-sponsored Exchange Program — *Shanghai, China*

Research Experience

- **Nanjing University** — Nov. 2018 – Dec. 2019
  National training Program of Innovation for Undergraduates — *Advised by Prof. Jie Guo*
  - **Detection Technology of Specific Acoustic Scene based on Deep Learning**: Constructed a CNN model for detection and classification of acoustic scenes. Developed a music player that supports automatic equalizer settings based on this model.

Activities & Honors

- **Assembly Language Course Teaching Assistant** — Jul. 2019
  Teaching assembly language and knowledge of Linux — *Advised by Prof. Haijun Wu*
- **Peer mentor** — Sept. 2019 – Sept. 2020
  Imparting learning methods and career planning.
- **Nanjing University's Microsoft Club** — Sept. 2017 – Sept. 2020
  member
  - **Code visualization**: Developing a program in Microsoft Nanjing Hackthon competition.
  - **WAIC2019**: Participating in Microsoft's AI for ALL conference in WAIC 2019.
- **Nanjing University's Tencent Club** — Sept. 2018 – Sept. 2020
  Vice Minister of Practice Department

Courses & Projects

Courses I've attended

- **Shopping Management System**: Using C to implement the operation of add, delete, modify and search, using Qt to implement UI, and using edit distance algorithm to implement fuzzy search.
- **Personal Database**: Using C to implement a database which can parse mysql statements and perform create, drop, insert, delete, update, select operations.
- **Othello AI**: Using α-β pruning and greedy algorithm to implement an automatic chess strategy for Othello.
- **Personal Calculator**: Using C to implement the lexical analyzer and grammar analyzer to parse the calculation expression and give the result.
- **Ping-Pong Game based on Breadboard**: Designing a simulated two-person ping-pong game circuit and implement it on a breadboard.
- **Beauty Software**: Using matlab and matlab gui to implement a beauty software which includes many photo processing and beauty functions.
- **Comprehensive Experiment of Digital Circuit**: Using Verilog HDL to implement a simple computer system on the FPGA of the DE10-Standard development board, which can run simple instructions and process a certain amount of input and output. Using mips language to complete basic terminal functions and a number of mini games.
- **Comprehensive Experiment of Computer System**: Using C to implement a simplified x86 emulator which includes using virtual registers to simulate data storage and operations, x86 instruction's decoding and execution, segmented page storage structure of computer system, exceptions, interrupts and IO, etc. Finally, we can run PAL1 on our x86 emulator
- **Comprehensive Experiment of Operation System**: Using C to implement a simplified operation system which includes system boot, system call, process switch and thread switch, process synchronization, file system.
- **Comprehensive Experiment of Compiler**: Using C to implement a simplified compiler which includes lexical analysis, syntax analysis, semantic analysis, intermediate code generation, intermediate code optimization, target code generation, target code optimization.
- **Comprehensive Experiment of Machine Learning**: Using linear regression, knn, lstm, random forest, xgboost, lightgbm, etc to forecast the traffic time index around Shenzhen North Station.
  (https://competition.huaweicloud.com/information/1000040088/circumstance)

Miscellaneous

- **Languages**: C, Python, LaTeX, Markdown, Matlab
- **Interests&Hobbies**: Reading the Sci-Fi, Playing the piano, Traveling and recording my life