Thuc Tran Duy

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Hi, I'm Thuc. I'm currently a freshman at Gettysburg College. Aside from being a student, I am an avid programmer, a devoted drummer, and a prolific writer. I have a passion for technology and motivation for exploring topics that are beyond my interests.

Despite being young, I have experiences with various technologies and can acquire a firm grasp of something new quickly. This inquisitive trait helps me attain a broad knowledge of different areas of programming to apply to specific positions. I am looking for internships that allow me to build upon my existing skills and adapt them to the production environment.

If you want someone who is dedicated to their work, an unflinching risk taker, and an accountable apprentice, please look no further. I'm more than willing to hear you out.

Projects

Throughout my learning journey, I have made some projects that let me dabble with various concepts. Here are a few of them:

My website

A blog I made using NestJS. I wrote it with several goals in mind:

1. To make a fast static site generator that could supplant my old blog using GatsbyJS.
2. To learn more about server hosting, maintaining and cloud technologies.
3. To be a digital journal that I can practice my writing with.

This project is a catalyst for me to understand the concept behind technologies I used in the past while experimenting with different toolings like Cloudinary and Azure services. Not using a frontend framework like React is a different experience that led me wanting to make my own custom frontend framework. I also dipped into Terraform with a view to incorporating it into my website later on.

yiyi

An invitation-based chatroom application. I made it using Prisma and NextJS. With this project, I got acquainted with Redis and also developed something from *back* to *front*. For a month, I hosted the server and database on my own computer and was able to keep up with some traffic from students in my class as well as family members.

I would love to revise this project in the near future and apply WebRTC to have video conferencing as one of its features.

My custom keyboard

A hand-wired ergonomic keyboard. It operates like a normal keyboard but with the added benefits of programmability and ergonomics. Together, I acquired a good sense of low-level programming and chip computing. You can read more about the making of it on my blog.

Along with this keyboard, I have other small CAD projects, including 3D printable keycaps, PCBs, and CNC-ready keyboard cases. They could be found on my GitHub.

Chip 8 emulator

An emulator made in *C++* that is capable of running Chip 8 ROMs. This was an attempt in learning how to replicate the RCA 1802 microprocessor. The emulator works for all the compatible games and provided me a base to work on Gameboy emulation, which I'm currently doing.

Our family's "gia phả"

This project is an extensive ancestry tree whose work spanned over a summer. To document over 600 indexes of different members in our extended family across generations, I used Visual Basic to do the scripting through PowerPoint; thus, alleviate the strenuous task of manually inputting information.

The project was an overwhelming success, as I created a tool that could digitize written data for future use. I plan to extend this project and make a webpage where users can quickly make changes to the whole family's lineage. You can view the existing pdf containing all entries here.

Experience

An award winning Air Quality Prediction model

2022-06 – 2022-11 VN

This model was developed for a data science competition at the Foreign Trade University of Hanoi. Our team got both third place and prospective awards. Working with other people also taught me the essence of communication, public speaking, and more about AI.

While developing the UI for users to interact with the models, I also learned about AI and concomitantly work on a model as well as proofreading other teammates' works. I found out that despite being new to the technologies, I could go about implementing other aspects of the project to the best of my ability. The five months of developing and learning have been very fruitful and I'm very grateful for such experience.

Volunteer at the Youth Forum

2017 – *current* VN

This is an annual summer event hosted and led by the Emmanuel Community of Vietnam. Being a participator, I have mainly been volunteering in the music band as a drummer for roughly 7 years. Working with others has helped me exercise social interactions and sharpen my communication skills. I have, through persistently playing drums, developed a more ardent commitment to music while expanding my connections.

Besides music, I assist the core team with automation for arduous tasks using Google Apps Script and helped designed several artworks.