# Peter Phan

617-595-1034 | ipeterphan@gmail.com | linkedin.com/in/pkphan | github.com/pphan-sil | pphan-sil.github.io/Portfolio

## Education

**University of Massachusetts Amherst** — Amherst, MA
*Bachelor of Science in Computer Science, Major in Mathematical Computing* — *Sep. 2020 – Present*

## Experience

**Research** — Oct. 2019 – June 2020
*Harvard-MIT Science Research Mentoring Program* — *Cambridge, MA*

- Performed research based on Dynamics of Spinning Black-hole Binaries with Python
- Built simulations and graphs for merging blackholes
- Interpreted gravitational wave data from the Laser Interferometer Gravitational-wave Observatory
- Presented findings in a symposium at Harvard's Center for Astrophysics

**Software Internship** — Aug. 2019
*Audible* — *Cambridge, MA*

- Developed a Alexa Skill to recite haikus and iambic pentameters given key words
- Implemented AI to generate unique poems for given structure and words
- Processed data from dictionary API
- Experienced project management and development cycle as a software engineer

## Projects

**Linux Rice** | *Lua, Shell, Unix* — June. 2020 – Present

- Created extensive configurations for Hyprland, AwesomeWM, bspwm, and i3 window managers
- Designed and developed custom scripts and widgets to control computer's hardware and apps
- Worked with various workflows in KVM, QEMU virtual machines, and WSL environments
- Created an IDE level Vim (Neovim) configuration in Lua
- Navigated various OS and Linux distributions based on Arch, Debian, and Nix

**CS Docs** | *Git, Node.js, TypeScript, VuePress* — July. 2022

- Wrote 20K+ words worth of proofs on algorithms, machine learning, and mathematical topics
- Rendered inlined LaTeX (KaTex), pseudocode, and vector graphics on Markdown webpages
- Implemented automatic navigation and side bar from project's file structure
- Designed custom CSS theme for Markdown components

**Emoji Doodler** | *Arduino, G-code, OpenCV, PyTorch* — Feb. 2022 – Apr. 2022

- Built a robot CNC printer that uses polar coordinates
- Calibrated motor drivers with G-code instructions
- Trained and analyzed AlexNet, ResNet, and Vision Transformer models
- Achieved near human accuracy (65%) on classifying human facial expressions

**CRLS Health** | *Google Charts, HTML/CSS, JavaScript* — Sep. 2019 – Dec. 2019

- Collected and displayed over 20 years worth of data on highschool students' health
- Visualized live dynamic charts of data with user input
- Generated online quiz questions and solutions based on data

## Technical Skills

**Languages**: Python, Javascript, TypeScript, Java, C/C++, Lua, SQL (Postgres), Nix
**Frameworks**: Astro, Svelte, React, Node.js, Next.js, Vue.js, Angular, Flask
**Developer Tools**: Git, Vim, Tmux, VS Code, Docker, IntelliJ, AWS, Eclipse
**Libraries**: Jupyter, Matplotlib, NumPy, pandas, SciPy, PyTorch, TensorFlow