Peter Chaya

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Education

- **City College of New York, Grove School of Engineering** — New York, NY
  Bachelor of Engineering - Computer Engineering — *May 2024*
  - **GPA**: 3.535
  - **Awards**: Dean's List Fall 2020 & Fall 2021 & Spring 2023 & Fall 2023, Peter F. Vallone Scholarship
  - **Clubs**: Association for Computing Machinery (ACM), American Society of Mechanical Engineers (ASME)

Skills

- **Languages**: C++, Java, MATLAB, Python, HTML, CSS, JavaScript, VHDL, SQL
- **Frameworks**: JavaFX, Android, React.JS, Pytorch, Flask
- **Tools**: Git, MultiSim, NI Labview, VS Code, Microsoft Office, mySQL, Quartus, MODELSIM, Electric, LTSPICE
- **Platforms**: Windows, Linux, WSL, Web, Android
- **Spoken Languages**: English (Native), Arabic (Fluent)

Projects

- **Senior Design: ChatLingo — City College of New York** — December 2023 - May 2024
  - Collaborated within a team to develop a real-time translation chat application using React Native, PyTorch, and Flask frameworks to ensure seamless integration of AI-powered translations
  - Implemented a pre-trained deep learning translation model (MarianMT) to automatically translate input text into the user's language.
  - Used Firebase for management of user data, chat history, user authentication, and synchronized chat messages.
- **Digital Integrated Circuits: Shift Register — City College of New York** — November 2023 - December 2023
  - Designed and Simulated a 4-Bit Shift Register using various CAD tools such as Electric, LTSPICE, IRSIM, and Pathwave Advanced Design System (ADS)
  - Designed a CMOS D Flip-Flop schematic and layout using transmission gates, inverters, and NOR gates
  - Conducted thorough simulations using LTSPICE and IRSIM to validate the design's functionality, ensuring precise input-output characteristics of the 4-Bit Shift Register
- **Computer Engineering Lab: DSP Using a FPGA — City College of New York** — July 2023
  - Implemented and analyzed a Discrete Comb Filter on a FPGA board
  - Integrated digital-to-analog and analog-to-digital converter chips and monitored its outputs using an oscilloscope
  - Determined system parameters to verify the comb filter's transfer function
  - Utilized MATLAB to model and validate the frequency response of the filter
- **Computer Organization: Adder/Subtractor Circuit — City College of New York** — April 2023 - May 2023
  - Employed LPM modules to design and simulate a digital computational circuit on a virtual FPGA board based on Intel API and validated it's functionality through MODELSIM simulations
  - Designed a SRAM module and enabled seamless read and write operations, integral to the integration within our digital circuit design
  - Executed arithmetic operations using control signals including addition, subtraction, and cumulative addition and subtraction ensuring accurate and efficient computational capabilities
- **Software Design Laboratory: 2FastThumbs — City College of New York** — April 2022 - May 2022
  - Worked in a group to develop an Android texting speed test app in Java and integrated Back4App database for a global leaderboard, enhancing user experience and competitiveness
  - Implemented algorithms to calculate words per minute and accuracy by tracking character input

Experience

- **Baldwin Technology - New York Presbyterian Hospital** — New York, NY
  IT Contractor — *June 2023 - August 2023*
  - Troubleshooted and repaired hardware, software, and network issues affecting hospital staff to ensure minimal disruption to the healthcare operations
  - Collaborated with colleagues to complete tasks efficiently and accurately
  - Worked on a project to upgrade outdated computers to newer hardware without interrupting the hospitals workflow