Preetkaran Kundi

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Education

- **Toronto Metropolitan University** Ontario, Canada
  Bachelor of Engineering (B.E) - Computer Engineering *September 2018 - September 2023*
  Key Courses: *Operating Systems, Control Systems , Network Security, Advanced Computer Networks, Embedded Systems Design*

Skills Summary

- **Languages**: Python, C, C++, C#, JavaScript, Java, VHDL
- **Platforms**: Linux, Web, Windows, Raspberry Pi
- **Software Tools**: Visual Studio, GIT/GitHub, Matlab
- **Soft Skills**: Leadership, Writing, Time Management, Communications, Adaptability, Problem-Solving

Projects

- **5G in Healthcare (Javascript, Python, sh)**:
  - Developed a medical scanner simulation app using JavaScript that included multiple screens and button functionality. Although the original plan was to integrate TCP socket and file storage functionalities, due to technical limitations, the implementation was not completed.
  - Configured a client client connection to an Orthancs server hosted on a Raspberry PI
  - Created a shell script capable of monitoring a local folder used by cloud service MEGA, in which it reads the uploaded file to call an open source python script to upload to an Orthancs Server
- **Media Center - Embedded Systems(C)**:
  - Designed and implemented a program for a Media Center on an LPC17xx microcontroller board with a joystick, graphical LCD, and LEDs.
  - Developed a Menu system with three options (Photo Gallery, MP3 Player, Game) that allows users to navigate through them with the joystick
  - Programmed a Tic-Tac-Toe game that displays on the LCD and make moves with the Joystick. Users will face off against a computer that makes a random move as soon as their input is entered.
- **Pong Game using an SVGP - Digital Systems (VHDL)**:
  - Designed and Implemented a functioning game of Pong Using VHDL and the Xilinx ISE 13.4 Software on an FPGA board with VGA Output
  - Designed a clock manipulation technique to set the clock at 25 MHz, as well as the behaviour of the ball when it a paddle, wall, or scored a goal
- **Multicast Overlay Network (Python)**:
  - Designed and Implemented a Multicast network with routers set as a source, forwarded, or a receiver, each with set paths between each other.
  - Implemented Djikstra's Algorithm to get the shortest path between source and receiver using he forwarders, and tested by sending packets from source to receiver along the determined shortest path

Volunteer Experience

- **Toronto's Ribfest Volunteer**: **Toronto, ON** June 2017 - July 2017
  - Collaborated with a team of volunteers to maintain cleanliness and orderliness of the event by managing waste disposal stations, separating recyclables and non-recyclables, and ensuring proper disposal of hazardous materials.
  - Demonstrated leadership skills by supervising and coordinating parking lot duties, efficiently directing and guiding incoming vehicles to designated spots
  - Developed teamwork and problem-solving skills through effective communication and collaboration with a diverse group of individuals from different backgrounds
- **Microskills Summer Camp Volunteer**: **Toronto, ON** July 2017 - August 2017
  - Assisted in Planning and supervising recreational and educational events
  - Collaborated with other volunteers to organize and execute daily camp activities
  - Developed leadership skills by managing and mentoring campers