Kyler Kopacz

GitHub: https://github.com/KylerKopacz
Personal Website: http://kylerkopacz.me
(708) 340-5358 · kkopacz21@amherst.edu
16 Barrett Hill Dr, AC # 0332 Keefe Campus Center, Amherst, MA 01002

EDUCATION

Amherst College | Amherst, MA | *Bachelor of Arts in Computer Science* *Expected May 2021*

- GPA: In-Major: 3.85/4.00 | Cumulative: 3.33/4.00
- **Computer Systems (COSC-171) |** *https://github.com/KylerKopacz/amherst-systems* *September 2018*
  - **Topics Covered:** ISAs, Virtual Memory, Caching, Memory Management, Threads and Synchronization, File Systems, Virtual Machines, Embedded Systems
  - **Projects:** Recursive Exponentiation x86, Heap Allocator, Virtual Memory Translation, Page Swapping, VFS
- **Data Structures (COSC-211) |** *https://github.com/KylerKopacz/amherst-cs211* *January 2018*
  - **Topics Covered:** Stacks, Queues, Heaps, Binary Search Trees, Hash Tables, Red-black Trees, Dictionaries, and Tries
  - **Projects:** Word Counting Dictionary, Postfix Calculations using Stacks, Spellcheck Trie
- **Networks (COSC-283) |** *https://github.com/KylerKopacz/amherst-networks* *September 2018*
  - **Topics Covered:** Layered Network Structure, Signaling Methods, Error Detection and Correction, Flow Control, Routing, Protocol Design and Verification
  - **Projects:** Cyclic Redundancy Check Error Detection, Flow Control, Fortune Cookie Server

Skills: Proficient in Java, C, Object-Oriented Programming, Data Structures, Networks, Systems

WORK EXPERIENCE

Salon Agape & Co. | *Frankfort, IL* | Front End Developer *October 2016 - Present*

- Deployed and maintained the salon web application using WordPress
- Reengineer the UI implementing HTML, CSS, JavaScript, and Bootstrap (Progress on GitHub)

Salon Agape & Co. | *Frankfort, IL* | IT Manager *June 2017 - Present*

- Installed printers and built custom computer systems for the salon
- Installed Millennium Salon Software, and transferred previous client information from Vagaro web app to Millennium
- Troubleshoot Millennium de-syncs using network diagnostic tools to keep computer systems synced

PROJECTS

GroupMe Chat Bot | *Python* | *https://github.com/KylerKopacz/amherst-baseball-bot* *September 2018*

- Deployed a chatbot that responds to commands in the Amherst Baseball GroupMe chat
  - Employs BeautifulSoup4 and Requests python libraries to web scrape meals at Valentine Dining Hall. Users can request the information using "!Breakfast", "!Lunch", and "!Dinner" commands
  - Implements Requests library and the National Weather Service API to retrieve the current conditions in Amherst at current and future times. Group members type "!Weather" to receive the formatted information
  - Planned updates include implementing TextBlob Natural Language Processing library to formulate more realistic and articulate bot responses and using Requests to web scrape daily MLB schedules and results

Cyclic Redundancy Check | *Java* | *https://github.com/KylerKopacz/amherst-networks/tree/master/project-1* *September 2018*

- Split message bytes into frames to allow for error detection in a network simulation
- Implemented Parity-bit error detection in network stack simulator using Java bitwise operations to check received frames for 1-bit errors per frame
- Coded Cyclic Redundancy Check error detection technique in a network simulation using Java bitwise operations and binary modulo 2 division to check received frames for up to 8-bit errors

LRU Memory Page Swapping | C | *https://github.com/KylerKopacz/amherst-systems/tree/master/project-5* *November 2018*

- Engineered a program to swap out main memory pages to a backing store device when main memory is full
  - 32-bit virtual addresses are mapped to real memory locations, and can be located by using a page table
  - When there is no available space, the program swaps the least recently used page and sends it to the backing store device, clearing up space in main memory for new pages to be written
  - If a page on the backing store is referenced, the program retrieves it and loads it back into main memory, swapping the least recently used page in main memory to the backing store device

CAMPUS INVOLVEMENT & INTERESTS

Campus Involvement: Amherst Artificial Intelligence Club, Amherst College Baseball Team, Intramural Soccer
Interests: programming, baseball, fishing, photography, video game development, reading, weight lifting