

Patrick Earl

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Allentown, PA

EXPERIENCE

Kutztown University of PA

Instructor

Kutztown, PA

08/2019 - Present

- Facilitate and deliver lectures for undergraduate computer science courses. Primary topics taught include:
 - Computer Science I (taught using C++)
 - Data Analysis using **Python** & Pandas
 - Data Visualization with Tableau
 - Computer Networks (Focus on App-Layer Protocols and overview of TCP/IP Reference Layers)
 - Linux (Filesystem Overview, Basic Commands, Processes, Text Processing, Scripting)
 - Computing Systems Integration
- Serve on departmental and university-wide committees.
- Maintain various PHP web applications used by the CS&IT Department.

Kutztown University of PA

Graduate Assistant

Kutztown, PA

08/2018 - 05/2019

- Assisted with data collection for an *NSF* grant.
- Held tutoring hours for undergraduate computer science students.

St. Lukes University Health Network

Data Reporting Internship

Allentown, PA

05/2018 - 08/2018

- Improved and added features to an existing **Python** application used to verify links between records in vendor-specific databases.
- Created **Python** selenium script used to automate downloading of CSV files from a web application.

EDUCATION

Kutztown University of PA

- Data Analytics Graduate Certificate Dec. 2020
- Master of Science (Computer Science) May 2019
 - Focus: *Computer Networks*
- Bachelor of Science (Computer Science) May 2018

PROJECTS

Kutztown University

- Collaborated with University IT department on various projects to improve student learning.
- Helped craft grant proposal for NSF *CS4All* grant which was accepted early 2021, with the focus on developing a CS curriculum framework to introduce K-12 students to CS topics. Will be serving on the advisory board and help with running and leading workshops for 6 days in 2022-2023.

KU - Graduate Studies

- Graduate Group Project which focused on designing a computer network for a fictional university. Group was tasked with selecting equipment, creating network room layouts, and subnetting our allocated IP block.
- Developed distributed chat server for Linux using C++ with a multi-process server that kept client records in shared memory.

SKILLS

Technical

- **Programming Languages** - Python, C++
- **Computer Networking** - DNS, HTTP, Routing, TCP/IP Reference Model
- **Linux System Administration** - BASH Scripting, Management, Software Installations