

# Patrick Earl

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Allentown, PA

## EXPERIENCE

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### Kutztown University of PA

*Instructor*

Kutztown, PA

08/2019 - Present

- Facilitate and deliver lectures for undergraduate Computer Science courses. Primary topics taught include:
  - Introduction to Computer Programming (taught using C++)
  - Introduction to Data Analysis with Python & Pandas
  - Data Visualization with Tableau
  - Computer Networks (Focus on App-Layer Protocols and overview of TCP/IP Reference Stack)
  - Linux (Filesystem Overview, Basic Commands, Processes, Text Processing)
  - Computer Systems Integration
- Service on departmental committees.
- Maintain PHP web applications written for 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

- Developed Python application that confirmed data linkage between two datasets.
- Created Python Selenium script to automate downloading of CSV files from web app.

## SKILLS

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### Technical

- **Programming Languages** - Python, C++
- **Databases** - SQL, Database Management, and Creation
- **Computer Networking** - TCP/IP Reference Model, App-Layer Protocols, Routing
- **Linux System Administration** - BASH Scripting, Management, Software Installations

## EDUCATION

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### 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

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### 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

- Team Project to design network for a fictional university by selecting equipment, designing rooms, subnetting, etc.
- Developed "distributed" chat server developed for Linux using C++ with a multi-process server that uses shared memory.