Lyle Boland Bleckel

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Education

Bowdoin College — Brunswick, ME

BA Computer Science, BA Mathematics — *Aug 2014 – May 2018*

Relevant Courses: Data Structures, Algorithms, Foundations of Computer Systems, Mobile Computing, Optimization and Uncertainty, Nature Inspired Computation, Computational Geometry, Principles of Programming Languages, Data Visualization, Multivariate Calculus, Linear Algebra, Probability, Statistics, Mathematical Reasoning, Numerical Methods, Advanced Linear Algebra, Rings and Fields

Relevant Experience

Languages & Technologies: Java, Spring Boot, Python, Unix, Git, REST & GraphQL, Kubernetes, LaTeX

IBM — Littleton, MA

Software Engineer – AI Apps Supply Chain Intelligence Suite — *Jan 2021 - Present*

Associate Software Engineer: Worked in Agile environment to develop and maintain backend cloud-native spring boot Java applications with React frontend integrated into the IBM Supply Chain Intelligence Suite. Built on containerized microservice architecture with CI/CD principles and testing emphasized. Application leveraged Cassandra and Elasticsearch databases on the backend and utilized Kafka events to relay state updates. Led daily scrum when the scrum leader was absent. Spearheaded two mini-projects within our offering: 1. standing up and managing custom Elasticsearch instance and 2. upgrading and migrating all of our microservices to an updated versions of open source libraries.

Jumpstart Program: Worked in a small team in my first 6 months at IBM to develop a Quantum Computing dynamic conversation tool to aid new quantum developers in learning the Python Qiskit framework and basic quantum tools on IBM Cloud. Focused on design thinking, new development skills, teamwork, and cross department collaboration.

Buckingham Browne & Nichols School — Cambridge, MA

High School Computer Science & Mathematics Teacher — *Aug 2018 - Aug 2020*

Advanced Topics in Computer Science: Senior seminar class for students who had previously completed the AP CS curriculum. Explored various advanced topics of computer science including bit level representation of data, advanced algorithms, cryptography, graph theory, machine learning, and more. Course was primarily taught in Python and Java/Javascript. Designed curriculum from scratch.

AP Computer Science: Taught two sections of AP Computer Science A. Following the AP curriculum, taught the basics of programming in Java, object oriented programming, and data structures. Course covered much beyond standard AP CS A curriculum including trees, recursion, and linked lists.

Computer Programming: A precursor to AP Computer Science, this class was designed for those who wanted to get a basic level of programming without the complete rigor of the AP curriculum. Covered 50% of material covered in the AP at about 80% of the difficulty. Introduced students to basics of programming with Java as well as Strings, ArrayLists, Classes, and more.

Geometry Advanced: Taught two sections of a newly designed mid-level geometry to sophomores and juniors. Developed and implemented a curriculum to match the level required for the new course. Worked to incorporate technology and computational thinking into most units.

Booz Allen Hamilton — McLean, VA

Data Science Intern – Machine Learning — *Summer 2017*

Batch & Streaming Pipeline for EEG Data: Developed a machine learning data processing pipeline for binary classification of EEG sensor data on a team with two other interns and two full time employees. Built on Keras and Tensorflow, pandas, numpy, scikit-learn, as well as custom designed signal processing and machine learning algorithms. Focused on the development of the DNN for final classification. Built batch pipeline for model training as well as a streaming pipeline for live classification of EEG data. Visualizations in d3.js and Dash for Python.

Bowdoin College — Brunswick, ME

*Student Researcher – **Maine Space Grant Consortium Fellow*** — *Summer 2016*

Synthetic Building Energy Use Generator: Developed a synthetic energy simulator in Python for smart-building energy use based on individual device energy sensor data. Models trained from real-world data gathered from previous projects. Took time-series sensor data and output a model of energy usage (on time, active length, down time). Developed for research into energy disaggregation algorithms. Used custom machine learning algorithms as well as numpy and pandas.

Other Experience

Bowdoin College Center for Learning and Teaching Brunswick, ME

Computer Science Tutor *Aug 2014 - May 2018*

Study Group Leader: As a student at Bowdoin College, led weekly study groups for introductory and accelerated introductory computer science classes, as well as the introduction to systems class.

Bowdoin College Outing Club Brunwsick, ME

Trip Leader *Spring 2015 - Spring 2018*

Outdoor Leader: Participated in a 3 month leadership training program to learn how to safely and effectively engage fellow students in outdoor activities. Led trips throughout the school year across Maine and New England.

Orientation Trip Leader: Led a yearly orientation trip for incoming Bowdoin College first-years three times (2015, 2016, 2017).