

# ALLAN MILLER

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## EDUCATION

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### Loyola University Chicago

M.S. Computer Science

Graduate Teaching Assistant Scholarship Award

Grace Murray Hopper Service and Leadership Award

Fall 2017 - Spring 2020

Cumulative GPA: 3.97/4.0

Fall 2018 - Spring 2020

May 2020

### University of Maryland, College Park

B.S. Chemical Engineering

Dean's List

College Park Scholars Program Citation: Science, Discovery and the Universe

Fall 2011 - Spring 2016

Spring 2016

Fall 2014

Spring 2013

## PROJECTS

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### MNIST Digit Recognition

Responsive website allowing live classification of hand-written digits as well as creation of new processed samples under the MNIST dataset format. The achieved F1 score is 0.91. *Python (Tensorflow, Keras, Scikit-learn, Pandas, Numpy, Matplotlib)*

### Patient Data Disease Recognition

Patient Blood test machine learning to determine if a sick patient's data indicates a change in health worth investigating *RapidMiner (Decision tree, Deep Learning, Naive Bayes, Regression)*

### MiniJS Compiler

AST Parser and Interpreter written in Scala for a JS Compiler *Scala*

## SKILLS

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### Languages

Python, Java, Scala, C, JavaScript, SQL, R

### Modeling Applications

Matlab, Minitab, Pro Engineer, ChemCad, RapidMiner, RStudio

### Coursework

Machine Learning, Data Mining, Algorithms, Distributed Systems, Programming Languages, Networks, Vulnerabilities

### Tech Stack

Docker, Kubernetes, git

### Design Principles

Functional Programming, OOP, TDD, Agile, Design Patterns

### Utility Software

Google Drive, MS Office, Latex, Linux

### Foreign Languages

Hebrew - fluent

## RESEARCH EXPERIENCE

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### Loyola University Chicago

Graduate Researcher - *SSL Software Quality Metrics*

Fall 2019 - Spring 2020

*GitHub CLI and Ecosystem Analysis*

- Manage 11 undergraduate-students in software systems research
- Build CLI tool to perform analysis of GitHub repositories
- Mine GitHub projects to predict software survival metrics
- Submitted Abstract and Poster to Virtual Interdisciplinary Research Symposium

### Loyola University Chicago

Graduate Researcher - *SSL ZettelGeist*

Fall 2018 - Spring 2019

*Scholarly Academic Notetaking System*

- Multi-label Classification and Unsupervised Clustering on text data
- Mentor Undergraduate Students in Research Methods

## WORK EXPERIENCE

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### **Lewis University**

*Adjunct Faculty*

Fall 2019 - Spring 2020

*(CS1:Python)*

- Lecture students in basic CS concepts with Python
- Develop course assignments in Machine Learning, Game Modification, Cyber Security, and Data Analytics to help students demonstrate their coding skills

### **Loyola University Chicago**

*Graduate Teaching Assistant*

Fall 2018 - Spring 2020

*(CS1 and Algorithms)*

- Grade Student Projects and Homework
- Mentor Students in proper use of git and TDD
- Proctor Examinations and Substitute

### **Baxter Pharmaceuticals**

*Engineer II*

August 2017 - January 2018

- Prepared compounds for prototype and Assembled components for benchmark testing
- Assisted in product degradation long-term study
- Verified test components met product dimension specifications

### **Teva Pharmaceuticals Innovative R&D**

*Chemical Engineering Intern*

August 2016 - January 2017

- Authored report advocating conversion of batch to continuous reaction system
- Designed continuous centrifugal extraction system which doubled system capacity
- Designed and conducted reaction synthesis experiments
- Prepared development report for centrifugal extraction system
- Edited and revised experimental data for pilot report