# Sean Helm

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## Experience

### Capital One
**Sep 2018 –**

*Data/Software Engineer*

– Architected a caching solution in Java/Spring for a big data platform to reduce latency for recently run Snowflake queries.
– Lowered operational costs by enabling lifecycle management for the underlying cache and metadata using Python.
– Captured clickstream data with React.js and relayed to Amazon Redshift for user workflow analysis.
– Built out infrastructure with Jenkins and Terraform to automate deployment of AWS resources for cache microservice.

### Alarm.com
**Jun 2017 - Aug 2017**

*Software Engineering Intern*

– Optimized home automation testing by implementing a Windows service in C# for allocating device tests to available servers.
– Leveraged Ember.js to facilitate interaction with the distributed testing service and to display real-time testing results.
– Integrated a REST API with ASP.NET to serve as the bridge between the front-end client and the distributed testing service.

### Alarm.com
**Jun 2016 - Aug 2016**

*Software Engineering Intern*

– Automated a manual process by building an API in C# to efficiently update branding information on security panels.
– Implemented a caching system for account information to speed up the dealer site page load speed by 40-60%.
– Developed a responsive, customer-facing tool to allow home owners to search for and verify local home security dealers.

### Sure Secure Solutions
**Aug 2014 – Aug 2015**

*Software Engineering Intern*

– Revamped a static archive to a secure and dynamic web portal in PHP for easy maintainability.
– Redesigned the company website using HTML/CSS and JavaScript to make web pages robust and responsive.

## Education

### George Mason University
**May 2018**

*Bachelor of Science in Computer Science; Major GPA: 3.38.*

## Projects

### Music Genre Classification with Gradient Boosting

– Applied XGBoost machine learning algorithm in Python to classify music genres using features extracted with LibROSA.
– Utilized Matplotlib to produce visualizations of various performance metrics to help improve the classification model.

### Reddit Sentiment Analysis

– Filtered negative Reddit comments in real-time into MongoDB using TextBlob sentiment analysis.
– Created a user-friendly web application using Node.js, Express, and Vue.js to review newly extracted comments.

### Toxic Mushroom Deep Dive

– Compared Scikit-learn machine learning algorithms in Python for predicting whether mushrooms were toxic or edible.

## Skills

**Languages**:  Python, Java, SQL, JavaScript, C
**Frameworks/Tools**:  Spring, Hibernate, Scikit-learn, React.js, Terraform, Jenkins