

# Murtuza Kainan

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## Experience

### **Software Development Engineer II, Amazon Connect, AWS; New York City, NY – July 2021-Present**

I currently work on the Amazon Connect Cases team where I help to build a scalable case management system that works standalone and integrates powerfully with the wide Amazon Connect cloud call center available via AWS. I have been able to contribute to core case management features, telemetry and operational readiness, and core infrastructure efforts like resource tagging, and a distributed deletion infrastructure for GDPR compliance.

### **Software Engineer, Application Frameworks, Bloomberg L.P.; New York City, NY – April 2018-July 2021**

As an engineer on the R+ runtime team I developed features for the new JavaScript based runtime powering the Bloomberg Terminal and its associated server-less backend compute infrastructure. I helped to prototype and release new features, developer tools, instrumentation, and performance optimizations for the primary application framework running on top of a JavaScript/V8 based runtime. I also contributed to recruiting at Bloomberg by performing technical interviews for software engineering candidates and serving as a lead for Bloomberg's internal Intern Puzzle hunt.

### **Software Engineer, Equities Financial Applications, Bloomberg L.P.; New York City, NY – August 2017-March 2018**

I pre-trained (i.e, worked full-time before receiving Bloomberg's new hire training) on the Equities team and contributed to a new data ingestion backend architecture for financial applications delivering distribution data (about equity distributions such as dividends) to Bloomberg Terminal users. I also designed, developed, and deployed a ticket management bot for the team that made use of Bloomberg's internal ticketing infrastructure.

### **Software Engineer Intern, Qualtrics, Seattle, WA – May 2016-August 2016**

I worked on designing and developing the first version of a mobile SDK for embedded deployment of surveys and ads in customer applications for iOS and Android. I also contributed performance improvement features to the SiteIntercept survey embedding platform, and prototyped a new micro-service to power the platform's content management API.

## Education

### **Purdue University, West Lafayette, IN, USA - August 2013-May 2017**

Bachelor of Science in Computer Science with a minor in Physics, CGPA: 3.52,  
Concentrations: Systems Programming, Artificial Intelligence, Software Engineering

## **Technical Knowledge**

### **Programming Languages**

I am proficient in and have spent the most time working with the following languages: JavaScript/TypeScript, Python, C/C++, Java. I am very interested in, but have basic knowledge, of Rust, Golang, and the Lisp family of languages.

### **Web Technologies**

I am familiar with frontend web development using frameworks such as React, and Angular. I have also worked on backend services using a variety of programming languages and runtimes such as JavaScript/Node.js, Python/flask, Java, and C++. I am also familiar with the multi-process architecture of Chromium and have basic knowledge of embedding JavaScript runtimes using the V8 JavaScript engine.

### **System Design and Operating Systems**

I have a working knowledge of process management, system calls, multi-threaded application design, and OS/Kernel features for UNIX-like operating systems. I have limited knowledge of Win32 APIs and desktop technologies. I have an understanding of the tradeoffs involved when trying to design scalable, fault tolerant, and resilient distributed systems.

### **Databases Technologies**

I have a working knowledge of SQL based relational database systems and NoSQL document based storage systems such as MongoDB and DynamoDB. I also have basic knowledge of search platform technologies such as Apache SOLR and Elasticsearch.

### **Software Engineering Workflow**

I am proficient at using the git source control system and have experience working on teams that make use of agile software development methodology and iterative, scrum based development practices.

### **Data Science and Machine Learning**

I have a working knowledge of logistic regression, Naive-Bayes Classification, and K-means clustering analysis and basic knowledge of neural network based supervised, unsupervised, and reinforcement learning approaches.