

# Luka Brown

Full Stack Software Engineer

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## SKILLS

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**Languages:** Python, C/C++, C#, Java, SQL, NoSQL, HTML, CSS, JavaScript, CUDA, x86/MIPS Assembly

**Libraries:** AWS BotoCore, Boto3, YAML, Slack SDK, PySNC, Okta, PThreads, OpenMP, MPI, junit, Pandas, NumPy, Scikit-Learn

**Certifications:** Microsoft Technology Associate: Programming Using Python March 2019

**Tools:** Amazon AWS, Lambda, Redshift, EC2, CloudWatch, DynamoDB, S3, Git, GitHub, SVN, .NET Framework, RabbitMQ, RGS, Debugging (GDB), Agile/Scrum, Unit Testing, Linux CLI, Jira, Confluence

## EXPERIENCE

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### ARISTOCRAT TECHNOLOGIES

September 2023 – January 2024

#### DevOps Engineer

Austin, TX

- Utilized AWS Cloud Infrastructure for multiple CI/CD automation projects for internal developer efficiency and company standardization.
- Guided 3 interns on 2 different projects, assisting with onboarding, environment setup, introductions to key persons in the company, and managed sprint focus and ticket priority.
- Facilitated meetings with developers globally to understand Company needs and worked to prioritize and develop new features based on developer requests on internal CLI tool.
- Matured Large Asset Storage technology to overcome GitHub's limitations with AWS S3.
- Brought app from POC to production that allowed for internal GitHub repository management and created standards for automation potentials using AWS Lambda.
- Worked on shifting development builds to AWS EC2 for efficiency, uptime, and reliability.
- Created documentation for multiple projects including pages on Dev Environment Setup, App Usage Examples, DynamoDB Database Schemas, How to Contribute, and Python Style Guide.

### ARISTOCRAT TECHNOLOGIES

June 2023 – September 2023

#### Software Engineer

Austin, TX

- Named Inventor on Patent Pending technology related to player engagement profiles on Electronic Gaming Machines (EGMs) presented at Global Gaming Expo (G2E) in 2023.
- Developed C++ 5-reel replay functionality for EGMs for G2E presentation.
- Produced new writer class to communicate in-game rolls reset for sales demo experience.
- Implemented RabbitMQ in C# to send and receive custom messages to remote server in order to display new graphics for user achievements on EGM.

- Created documentation and graphics to describe new EGM workflow for internal PowerPoint, presented findings to CTO for next project phase approval.

## **TWITTER**

May 2021 – July 2021

### **Software Engineer Intern**

San Francisco, CA

- Utilized SQL and Python to analyze engagement data to inform marketing campaigns.
- Improved C++ components on data processing pipeline leading to 14% faster processing time.
- Documented several internal processes with step-by-step guides, enhancing dev efficiency.

## **EDUCATION**

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### **TEXAS STATE UNIVERSITY**

August 2019 – May 2023

**B.S. Degree in Computer Science.** Minor in Applied Mathematics. GPA 3.2. San Marcos, TX

**Coursework:** Machine Learning, Parallel Programming, Database Systems, Cybersecurity.

## **OPEN-SOURCE PROJECTS**

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### **GRADIENT BOOSTING REGRESSION ON HOUSING PRICES**

March 2023 – May 2023

#### **Lead Python Developer**

[github.com/lukabrown/Gradient-Boosting-Housing-Dataset](https://github.com/lukabrown/Gradient-Boosting-Housing-Dataset)

- Trained and tuned a gradient boosting model to predict home prices from Iowa dataset.
- Used dimensionality reduction, feature extraction, other techniques to transform the dataset.
- Final model performed better than 75% of all submissions to the Kaggle competition.

### **DECENTRALIZED NETWORK VOTING SIMULATOR**

October 2022 – November 2022

#### **Lead Python Developer**

[github.com/lukabrown/Secure-Voting-System](https://github.com/lukabrown/Secure-Voting-System)

- Applied directed acyclic graphs to create a self-verifying network of nodes to act as votes.
- Engineered custom hashing algorithm for trust validation and malicious node pruning.
- Simulated national elections and analyzed the outcomes for anomalies on a large scale.

### **CPU SCHEDULING SIMULATOR**

August 2022 – October 2022

#### **Lead C++ Developer**

[github.com/lukabrown/CPU-Scheduling](https://github.com/lukabrown/CPU-Scheduling)

- Utilizes first come first serve, round robin, highest response ratio next as algorithms.
- Allows the user to simulate a variable number of cores and workloads for each scheduler.
- Reports a suite of metrics used for CPU evaluation once the simulation completes.