



Brenden Matthews

CONTACT INFORMATION

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PROFESSIONAL SUMMARY

Experienced and accomplished software engineer with a strong background in Rust, C, C++, Python, and other programming languages. Recognized authority in the field of Rust programming with two highly acclaimed books published. Extensive experience in open source contributions and delivering impactful talks at prestigious conferences. Proven track record of successfully launching and managing businesses. Skilled in building and enhancing infrastructure using Kubernetes and other technologies. Strong leadership and consulting skills with a passion for driving innovation and delivering exceptional results.

PUBLISHED WORKS

- **Code Like a Pro in Rust**, Manning Publications. ISBN 9781617299643.
- **Idiomatic Rust**, Manning Publications. ISBN 9781633437463.

PUBLIC SPEAKING

I have delivered numerous impactful talks on my work at prestigious conferences and private engagements, including renowned events such as **All Things Open**, **QCon**, **LinuxCon**, **ContainerCon**, and **MesosCon**.

OPEN SOURCE

I have made significant contributions to hundreds of influential open source projects, including well-known ones such as Apache Airflow, Apache Kafka, Apache Superset, Apache Spark, and Apache Mesos (where I am a PMC member). I am also proud to be a member of the esteemed Apache Software Foundation. Additionally, I have personally created several highly regarded projects, with a few notable ones highlighted below:

Conky, C and C++ **7.2k+ stars**
Conky is a highly versatile and widely used system monitor utility for UNIX systems.

ThetaGang, Python **2k+ stars**
ThetaGang is a cutting-edge equity options trading tool designed to capture premium from theta decay. It is specifically tailored for use with IBKR.

dryoc, Rust **270+ stars**
dryoc is a top-tier, pure-Rust general-purpose cryptography library that is fully compatible with libsodium. It boasts advanced features such as generic hash functions suitable for cryptography, protected memory, zeroization, and SIMD.

- Successfully launched and managed multiple bootstrapped businesses
- Provided expert consulting services to a diverse range of clients, delivering exceptional results
- Authored two highly acclaimed books on Rust programming, establishing myself as a recognized authority in the field
- Made significant contributions to numerous open source projects, further solidifying my reputation as a respected industry professional
- Delivered captivating talks at various meetups, captivating audiences with my deep knowledge and expertise
- Created a number of open source technology demonstration projects, showcasing my skills and expertise to a wide audience
- Developed a comprehensive online training program for leetcoding in Rust based on the *Cracking the Coding Interview* book, enabling students to learn from the comfort of their own home

Engineering

As a key member of the engineering team, I played a pivotal role in building and enhancing the infrastructure using Kubernetes.

- Led a highly successful initiative to transform ad-hoc Bash-based deployment scripts into a streamlined, declarative Helm and Terraform-based deployment system
- Provided invaluable guidance and training to the entire engineering team, facilitating a seamless transition to Terraform and Helm
- Successfully migrated the primary Rails monolith to Kubernetes, improving scalability and performance
- Implemented a robust continuous integration and deployment system for Kubernetes applications, ensuring efficient and reliable software delivery
- Developed a comprehensive monitoring and alerting system for Kubernetes applications, enabling real-time monitoring and alerting of critical issues
- Spearheaded the development of a deployment pipeline for Kubernetes applications, significantly improving the efficiency and reliability of software delivery

Citadel LLC, New York, NY

Oct 2017 – Jun 2018

Engineering

As a member of the platform engineering group, I joined the data engineering team at Citadel to spearhead the development of their cutting-edge data platform technology. I primarily focused on integrating on-prem and cloud (AWS and GCE) data infrastructure.

- Led a highly successful initiative to modernize data access, control, and authorization, significantly enhancing data security and efficiency
- Managed a seamless migration of legacy data systems to PostgreSQL on RDS backends, improving scalability and performance
- Provided technical leadership to the data science team, guiding them on best practices for building and deploying large-scale machine learning jobs using Spark, Redshift, and Snowflake
- Developed a comprehensive data governance strategy, ensuring compliance with industry regulations and best practices
- Implemented a robust data quality monitoring system, enabling real-time monitoring and alerting of data quality issues

D2IQ (fka Mesosphere), Inc., San Francisco, CA

Jan 2015 – Feb 2017

Sales & Engineering

As one of the early employees at Mesosphere, I played a pivotal role in the company's foundation. I engaged in multiple customer engagements, serving in both pre-sales and post-sales positions. Additionally, I provided valuable assistance to management during fundraising pitches.

- Built and led the initial sales team, making key hires for VP Sales, early SEs, SAs, and Head of Services
- Developed comprehensive cloud migration plans for enterprise customers, enabling them to leverage the power of container technology and accelerate their innovation
- Delivered week-long in-depth onsite training sessions, equipping clients with the knowledge and skills to maximize the benefits of container technology
- Advised C-level management at Fortune 500 companies on container technology adoption, helping them drive their digital transformation initiatives
- Delivered captivating talks at various meetups and conferences, establishing myself as a thought leader in the industry
- Contributed to various engineering efforts, leveraging my technical expertise to drive innovation and deliver exceptional solutions
- Published several original blog posts, sharing my insights and experiences with a wide audience
- Built and maintained marathon-lb, the canonical load balancing and service discovery tool for Marathon and DC/OS, further solidifying my reputation as a leading expert in the field

Engineering

As one of the early employees at Airbnb, I joined the Data Infrastructure team to help scale the company's infrastructure and meet the growing demands of managing a large data warehouse. I collaborated closely with teams across the organization to fulfill their data needs and develop a robust set of data tooling.

- Spearheaded the development of the next generation of data infrastructure, leveraging open source tools such as Mesos, Hadoop, HDFS, Chronos, and Storm
- Made significant contributions to several projects, including Mesos, Hadoop, Storm, Spark, Presto, Chronos, Marathon, and others
- Played a key role in the early versions of Apache Superset (formerly known as Airpal), a powerful data exploration and visualization platform
- Led the development of cutting-edge data processing tools, including Apache Airflow, enabling efficient and reliable data workflows
- Implemented an automated verification system to improve data quality, ensuring the accuracy and reliability of Airbnb's data
- Coined the team motto of "*Provably correct data*", emphasizing the importance of data accuracy and integrity
- Delivered engaging internal tech talks on emerging technologies at Airbnb, sharing my knowledge and insights with colleagues

Engineering

At Newfield Wireless, I leveraged my expertise in 3GPP layer 3 to develop a highly efficient UMTS network data parser and indexer. I also designed and implemented a suite of real-time 3GPP LTE capture/parsing tools.

- Created a customized database solution with an integrated flexible query language, enabling real-time access to millions of streaming records
- Designed and implemented an asynchronous communication library with C++ and Python interfaces, similar to ZeroMQ, to facilitate efficient and reliable communication
- Developed a reporting library for generating key performance indicators from vast quantities of raw data, leveraging the customized database
- Introduced new development and debugging methodologies to the team, significantly improving development speed and deliverable quality
- Mentored and assisted junior and senior developers, fostering a collaborative and productive work environment
- Oversaw the design and implementation of schema-based XML software specifications, ensuring adherence to industry standards

Engineering

- Developed end-user applications, web services, and embedded software, delivering high-quality solutions to meet customer needs
- Played a key role in strategic planning, performance improvement, organizational design, e-commerce, new media, and Internet promotion, driving business growth and success
- Planned and coordinated team-building exercises, demonstrating strong leadership skills and fostering a collaborative work environment
- Configured and managed servers, automated backup systems, and provided exceptional customer and in-house support
- Leveraged new technologies to enhance the product-to-customer experience, delivering timely and cost-effective solutions
- Implemented a cost reduction IT strategy, optimizing existing infrastructure and minimizing the need for additional equipment purchases

PROGRAMMING
EXPERIENCE*Languages:* Rust, C, C++, Python, Ruby, Bash, Go, Java, Scala, Kotlin, L^AT_EX*Data Technology:* Kafka, Cassandra, Redis, PostgreSQL, ElasticSearch/Lucene, MySQL, Hadoop, Hive, Presto, RedShift, BigQuery, SQS, EMR, RDS, Snowflake, PyTorch, TensorFlow

AUTHENTICATION

The original source for this resume is available at github.com/brndnmthws/resume. Use the contact email address at the top of this document or the one listed on my GitHub profile if you suspect shenanigans (such as fake candidates posing with my profile/details).