

SHAKIR JAMES, PhD

EMPLOYMENT

Software Dev Manager **Amazon Web Services (AWS)** **Dec 2020–Present**

- Build AWS Accounts for all customers to create accounts and access other services.

CTO **DTI Management** **Nov 2017–Dec 2020**

- Restructure the engineering team into small crews: growing by ten times for a \$300MM/year enterprise.
- Implement agile dev processes: reducing the release interval from weeks to hours.
- Design architecture for cloud migration: achieving 0% downtime for sales processing.

CTO **1Ticket.com** **July 2017–Dec 2020**

- Move to a serverless, microservice architecture on AWS: reducing infrastructure costs by 7.4 times.
- Reduce the number of double sales across key marketplaces by five times: increasing revenue by 4 times.
- Build an [infinitely scalable backend architecture](#): increasing throughput from 2k tickets/hour to 200k/hour.

Assistant Professor **University of the District of Columbia** **Aug 2014–Aug 2018**

- Taught cloud computing: principles, algorithms, and tech (EC2, S3, DynamoDB, Hadoop, EMR).
- Taught network security and cryptography: theory, implementation, and hacking with Python 3.
- Taught advanced web development: techniques and technologies (React, Bootstrap, PHP, MySQL).

Senior R&D Engineer **Observable Networks** **Nov 2012–July 2014**

- Developed fast scalable data structures for big data analysis; reduced query time by 190 times.
- Automated server provisioning and deployment on Amazon EC2; reduced install time by 10 times.

Research Assistant **Washington University in St. Louis** **Aug 2006–Nov 2012**

- Built a peer-to-peer app and protocol that reduced costly traffic and distribution time by 40 and 41 times.

Technical Intern **Intel Corporation** **May 2008–Aug 2008**

- Developed utilities and methods to analyze the I/O dependence of Intel x86-based Unix applications.

EDUCATION

St. Louis, MO **Washington University in St. Louis** **Aug 2006–Dec 2012**

- Ph.D. in Computer Engineering, December 2012. GPA: 3.6
- M.S. in Computer Engineering, May 2009. GPA: 3.6

Wichita Falls, TX **Midwestern State University** **Aug 2002–May 2005**

- B.S. in Computer Science and Mathematics (Double Major), May 2005. GPA: 3.9

TECHNICAL EXPERIENCE

Projects

- **Open-source (2019)**. Contributed to [AWS Serverless Application Model \(SAM\)](#) and [AWS CloudFormation](#).
- **Micro-framework (2019)**. Built for serverless APIs: enabling local development. (Python, LocalStack)
- **Bitmap Filters (2014)**. Sped up query execution with in-memory data structures: compared to SQL, faster by 10–290 times. (Python, SQLAlchemy, Amazon S3, RedShift, Redis).

ADDITIONAL EXPERIENCE AND AWARDS

- **Publications (2007–2013)**: Wrote and published ten research papers.
- **Chancellor's Fellow (2006–2011)**: Awarded a competitive five-year fellowship to complete Ph.D.
- **Intel Goodie Drawer Award (2008)**: Honored for delivering timely and relevant analyses.
- **President's Medal of Excellence (2005)**: Won graduation medal for highest GPA in college.

See details in [my curriculum vitae](#).