

# BEN MALKIN

## Software Engineer

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(480) 239-1481

Scottsdale, AZ

Results-driven Software Engineer with strong interpersonal, leadership, and organizational skills. Leveraging experience in running a small business, I bring a unique blend of technical expertise and business acumen to developing innovative software solutions for complex problems. Skilled in distributed systems, algorithm implementation, data management, and full-stack development, with proficiency in RDBMS, web services (SOAP/REST), and Agile methodologies. Experienced in AWS cloud migration and development, adhering to the AWS Well-Architected Framework, with a strong focus on encryption and data security for Data-in-Transit (DIT) and Data-at-Rest (DAR). Proven ability to take ownership of software components in dynamic, startup-like environments, contributing to all phases of development, from architecture and implementation to testing and deployment, while delivering secure, scalable, and efficient solutions.

## WORK EXPERIENCE

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### Iridium Communications - Software Engineer II

April 2023 - Present

Tempe, AZ

- Contributed to the development of a next-generation satellite communication (SATCOM) system, successfully delivering a Minimum Viable Product (MVP) to support critical communication capabilities.
- Owned end-to-end responsibility for software components, from architecture and design to development, testing, and deployment.
- Developed and optimized backend logic and client-server systems using C/C++, enhancing the Operations and Maintenance dashboard for SATCOM systems with full-stack application improvements.
- Utilized a diverse tech stack, including C/C++, Python, JavaScript, JSON, XML, HTML, CSS, and Bash, for full-stack development across Linux platforms such as Debian, RHEL, and Amazon Linux.
- Optimized database interactions by implementing SQL database pooling and designing efficient schemas to improve performance and scalability.
- Aided in defining DevOps processes that utilized tools such as Docker, GitLab Runner, Ansible, and more to streamline development, deployment, and testing.
- Designed and integrated cryptographic DIT, DAR and Identification and Authentication (I&A) using WolfSSL FIPS 140-3 certified cryptographic module.
- Architected Key Management solution for mission DIT encryption using NIST SP 800-56 approved key derivation function (KDF).
- Developed scalable, fault-tolerant services in AWS EC2, adhering to the AWS Well-Architected Framework.
- Conducted dynamic (DAST) and static (SAST) code analysis using Valgrind and Coverity, automating codebase scanning and supported finding disposition and prioritization.
- Designed and implemented RESTful APIs for mission control systems, including support for cryptographic I&A and optimized client server interfaces to support up to 10,000 users/terminals
- Led Agile development processes as Scrum Master, facilitating sprint planning, backlog grooming, and promoting team collaboration for enhanced productivity.

### Arizona State University - Software Engineer Intern

May 2022 - December 2022

Tempe, AZ

- Developed ASU's Smart Knowledge Navigation and Discovery Platform by building a full-stack application leveraging Node.js and React frameworks.
- Implemented interactive data visualization using the D3.js library to enhance user experience.

- Led project development using Agile methodologies, ensuring timely and efficient delivery of features and updates.
- Collaborated with the product owner to align development efforts with the vision and goals of ASU's Smart Knowledge Navigation and Discovery Platform.
- Led project planning and execution, effectively managing schedules and milestones to meet deadlines.

## **Aerial Eye Drone Specialists LLC - Owner/President**

September 2017 - December 2022

Scottsdale, AZ

- Operated commercial drones as an FAA Part 107 licensed pilot, ensuring safe and compliant flights.
- Hired and managed employees and contractors, successfully expanding service coverage and territory.
- Provided real estate, small business marketing, and commercial videography/photography services to a diverse client base.
- Managed corporate social media and communication platforms, enhancing brand presence and engagement.
- Led customer acquisition efforts and managed client relationships, including contract negotiations and renewals.
- Developed and maintained company website, ensuring up-to-date content and functionality.

## **EDUCATION**

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### **Arizona State University (ASU) - Bachelor of Science, Computer Science and Cybersecurity**

August 2018 - December 2022, GPA: 3.62

Tempe, AZ

#### **Awards**

- Dean's List
- Magna Cum Laude

## **SKILLS**

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C/C++ • Java • C# • Python • JavaScript • Swift • HTML • CSS • JSON • XML • .NET • Linux Platforms (Ubuntu, RHEL, Kali, Amazon Linux) • Waterfall • Full-Stack Development • V-model • Agile • Symmetric and Asymmetric Cryptography for Data-in-Transit (DIT) and Data-at-Rest (DAR) • Cryptographic Identification and Authentication (I&A) • Key Management • Data Structures • Algorithms • Relational Databases • Development in Cloud (AWS) • Docker • DevOps • CI/CD

## **CERTIFICATIONS**

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- AWS Certified Cloud Practitioner