

# William Bassett

Software Engineer

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## Experience

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### Network Automation Engineer III

*Astreya (formerly EOS IT Solutions), Onsite @ META*

Jan 2020 - Present

- Pioneered an asynchronous Python API to automate the lifecycle management of engineering lab networks, reducing person-hours by 90% while improving network deployment quality by 98%.
- Developed comprehensive Python-based audit mechanisms, ensuring lab networks met desired configurations and generated real-time alerts for discrepancies.
- Transitioned to Astreya, expanding my role to provide SME guidance in engineering lab environments, including input on automated IP allocation design. Identified and implemented new automation opportunities, such as automating network policy configurations using Python and Thrift. Enhanced automation workflows by improving logging details and optimizing network ticketing outputs, significantly reducing triage time for network engineers.

### Freelance Software Consultant & Developer

*BassTech LLC*

Sep 2018 - Present

- **bWell Wear (Sep 2018 - Ongoing):** Led the end-to-end development of a WearOS smartwatch application using Android (Kotlin), Android Room database, Firebase Realtime database, and Firebase Authentication to assess flight crew mission readiness. Successfully navigated challenges associated with working with international airlines, including language barriers and ensuring compliance with internal data collection regulations. The application has become an essential tool in evaluating fatigue levels for pilots and flight attendants, playing a pivotal role in enhancing safety protocols.
- **NIRiS (Nov 2023 - Mar 2024):** Developed NIRiS (Nystagmus Inducing Ring Simulator), a virtual reality solution using Unity and C# for Oculus and HTC VIVE headsets, modernizing the industry-standard optokinetic drum. The solution significantly reduced costs and increased availability for researchers studying nystagmus.
- **bWell Breathe (Jan 2023 - Mar 2023):** Developed an Android application using Kotlin, Android Room database, Firebase Realtime database, and Bluetooth communication to aggregate and display pulse oximeter data for two distinct studies: a U.S. Air Force study on low altitude hypoxia, which led to additional funding for hypoxia mitigation research, and a separate academic study that demonstrated beards do not impair the effectiveness of emergency oxygen systems for airline pilots.

## Education

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**Embry-Riddle Aeronautical University**

2019

Bachelors of Science in Software Engineering

## Skills

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- **Programming Languages:** Python, Kotlin, Java, SQL, C#, JavaScript
- **Frameworks & Libraries:** Android SDK, Unity, Thrift
- **Databases:** Firebase Realtime Database, Android Room, MySQL
- **Tools & Platforms:** Mercurial, Git, Android Studio, VS Code, Oculus, HTC VIVE
- **Technologies:** Bluetooth communication, Firebase Authentication, Virtual Reality (VR)
- **Areas of Expertise:** Process Automation, WearOS Development, Virtual Reality Solutions, Data Aggregation & Visualization