Benjamin McLemore

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Work Experience

Aug 2022 - Present **Technical Team Lead, BI** Inecta

- Manage a team of developers and run the business intelligence department of the company.
- Architect and maintain an enterprise grade reporting application built in Plotly Dash.
- Architect data pipelines that integrate data from Microsoft Dynamics Business Central, Azure DevOps, Smartsheets, and other business tools.

Nov 2021 - Aug 2022 **Data Engineer** University Technology Office, Arizona State University

- Write Python data pipelines using Prefect to fulfill data requests from university departments, faculty, and staff, mostly on AWS infrastructure.
- Update and maintain the Jenkins code pipelines that deploy the department's data pipelines.
- Helped maintain some university portal web pages, which retrieve and display data from university APIs.

Aug 2021 - May 2022 **Software Developer** Arizona State University Honors Thesis Pathway

- Worked with a student software development team and a student accounting team to build a web-based accounting product for a private accountant to be released in the future.
- Developed the web application in the React and Express Javascript frameworks and hosted it on AWS infrastructure.

Education

Aug 2019 - May 2023 **Computer Science BS, Barrett Honors**, 4.0 GPA, Arizona State University

Industry Certifications

May 28, 2022 **AWS Certified Cloud Practitioner**

Classes in Specialized Areas

CSE 534: **Advanced Computer Networks** A

- Learned about various network architectures not used in the traditional Internet protocol stack such as named-data networks, with a focus on Future Internet Architectures and implementation details with SDN technologies such as OpenFlow and P4.
- Explored various networking testbeds currently deployed around the world, including FABRIC and SLICES, as well as their objectives and architectures.
- Gained experience developing on FABRIC, a national research testbed.
- Final Project: Designed and implemented a prototype for a networking protocol that could abstract L3 network traffic with many benefits including security and the ability to support multiple Internet Architectures simultaneously on the same network hardware.

CSE 325: **Embedded Microprocessor Systems** A+

- Learned about the fundamentals of embedded microprocessor system design and programming, including various forms of digital/analog conversion, hardware interrupts, hardware timing, and external device communication.
- Final Project: Built a simple, autonomous robot with a FRDM-KL46Z microprocessor and programmed it to navigate physical and color-coded mazes. Used external devices including PWM controlled motors with Hall sensors for speed/direction awareness, ultrasonic sensor with timing-based, GPIO communication, PWM servo (to turn the ultrasonic sensor), black/white ADC sensors, and an I2C color sensor.
- As an extension of the project, I attached an I2C Wii Nunchuk controller to the robot so that I could drive it around manually.

CSE 445: **Distributed Software Development** A+

- Learned about the service oriented computing philosophy, multithreaded and event-driven programming, using XML for data storage and transfer, and web application development and security.
- Final Project: Built an ASPX web application in .NET with user registration, authentication, and different access priveledges, access to third-party APIs, and a service oriented architecture using WCF services.

Skills

Programming Languages:
Python, Rust, SQL, C/C++, Typescript/Javascript, C#, Java, Prolog

Frameworks/Libraries:
Python: Pandas, Plotly, Plotly Dash, Jupyter Notebooks, Matplotlib
Typescript/Javascript: React, Express

Products/Technologies:
Infrastructure: AWS Core Services, Terraform, Jenkins
Development: Git, Azure DevOps
Data: Prefect, SQLite, Oracle Database/Oracle SQL Developer
Software: Azure Devops, Microsoft Dynamics Business Central