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BRAD SCHWARTZ

EDUCATION

- **University of Michigan - College of Engineering (Graduation: 2018)** 2014 – 2018
  - **Major:** Data Science Engineering **Minor:** Physics
  - Creator at SHIFT Creator Space Fall '15
  - Member of Pensacola Swing Dancing Club Fall '14 – Fall '18
- **Engineering Summer Study Abroad, Technical University of Berlin** Summer '16
  - Cooperated with 16-person team to develop portable solar charging stations from recycled materials, in order to meet energy needs of two environmentally low-impact refugee groups
  - Fabricated solar panel travel case and support stand with angular adjustment, ensuring maximum efficiency during sunlight hours and protection from climate

EXPERIENCE

- **Data Engineer, Capital One** Richmond, VA; July '18 – Present
  - Enhanced existing Ansible and Jenkins deployment scripts, automating prior manual steps and allowing for continuous integration and deployment of code to long-running Elastic MapReduce clusters and other automated EMR controls
  - Currently leading an 8-week learning series to get employees AWS Solutions Architect Associate certified
  - Facilitated the migration of multiple data streams across AWS Virtual Private Clouds, allowing for a single source of truth for regulatory data and tighter restrictions on access to said data
  - Modified third party self-hosted application to enable HTTPS traffic, allowing for secure creation of regulatory reports
- **Big Data Intern**, **Western Digital Corporation** San Jose, CA; Summer '17
  - Extended Python scripts used for automatic tagging of Amazon Web Services resources in order to achieve better tracking of usage and cost, and more thorough report generation
  - Built and deployed a Flask web application using Docker containers, integrated with AWS Elastic Compute Cloud Container Service and AWS ElastiCache, allowing for a load-balancing service with a responsive delivery system
  - Deployed multiple internal web applications, identifying key issues with firewall port and application blocking while gaining familiarity with networking protocols and server-side development
- **Research Assistant**, **University of Michigan High Dimensional Data Analysis** Ann Arbor, MI; Oct. '15 – May '17
  - Implemented an alternative solution to the Iterative Closest Point problem in Python to create a new matching algorithm involving a series of non-rigid motions
  - Reviewed mathematical publications in order to derive useful metrics for point registration problems
  - Explored the results of different algorithms on real world data sets for the purpose of creating a more accurate algorithm and understanding the properties of different formula and metric
  - Created models of new algorithm, using near-isometric and near-Euclidean linear transformations to verify predictions
- **Research Assistant, ATLAS Collaboratory Project** Ann Arbor, MI; Summer '15
  - Assisted in calibration of ATLAS detector at *European Organization for Nuclear Research* (CERN)
  - Participated in studies of detector measurements, analyzing possible future and reoccurring problems to ensure collected data is complete and accurate for future research
  - Created data analysis programs using C++ and CERN-created ROOT analysis framework to test detector measurements

TECHNICAL SKILLS

- **Programming Languages:** Python, Bash ,C++, LaTeX, SQL, Spark/Scala, Java, R
- **Software Technologies**: Amazon Web Services, Git, Docker, Jenkins, Ansible
- **Certificates**: Amazon Web Services Solutions Architect Associate

HOBBIES & INTERESTS

- **Travel:** Solo-backpacked across Europe, traveling through eight countries and 15 cities, experiencing many different cultures, cuisines, and landscapes, and hiking part of the East German Alps
- **Collections:** Have accumulated 200+ records which range across a variety of artists, genres, and eras
- **Achievements:** Four full completions of Super Mario Bros. 3 for the original Nintendo Entertainment System