ARIEL LUBONJA

Data Scientist & Full-Stack Developer

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Baltimore, MD

EXPERIENCE

Full Stack Developer

jBoxers

11/2018 - 08/2021 Sofia, Bulgaria

jBoxers is a company that offers software solutions in the fields of AI, Microservices, DevOps and Cloud Solutions

- Built and developed from scratch a Chatbot application for the University of Southern California
- Worked with the Library of Congress team to develop Use Cases and gather requirements for future development efforts to be undertaken by the company
- Worked on client-facing pages and backend solutions for the Library of Congress
- Supervised 2 summer interns for a period of 3 months

Junior Developer

jBoxers

09/2017 - 11/2018 Sofia, Bulgaria

- JavaEE ongoing project for Library of Congress, using Angular for front-end
- Python Django project for the Library of Congress to display and search over an enormous number of images and their OCR counterparts. Used Apache Solr for faceted search and indexing
- Developed tests using frameworks & tools such as Sonar, JUnit, Selenium, Protractor

Summer Internship

jBoxers

05/2017 - 08/2017 Sofia, Bulgaria

- Focused on the JavaEE technology stack and Spring framework. Covered topics such as: JAXRS, WebSockers, Web Servers and application deployment, Git, Maven etc
- Developed my initial skills in working with a software team, experienced the Scrum/Agile methodology in action and improved my teamwork skills

PROJECTS

High Performance Parallel Sparse Matrix Multiplication

01/2022 - Ongoing

Master Thesis under Prof. Randal Burns. Such operations are fundamental primitives in all Graph Algorithms. Efficient distributed computing and load balancing of such operations is still an open problem. More details TBA

EDUCATION

MSE - Data Science

Johns Hopkins University

01/2021 - Ongoing

GPA 3.88 / 4.0

BA - Computer Science

American University in Bulgaria

2014 - 2018

SKILLS

Optimization · Machine Learning · Parallel Computing · Apache Spark · Hadoop · Dask · MapReduce · SQL · Graph Algorithms · Python · MatLab · Java · Spring · Deep Learning · Computer Vision · Sparse Matrix Multiplication

PROJECTS

Natural Language Processing Annotator

06/2021 - Ongoing Grata.com

- Evaluated search result quality - providing ratings to help improve searching
- URL classification - classifying types of companies based on their webpages

Chatbot for Dialog with Book Characters for the University of Southern California (USC)

05/2019 - 07/2020

Demo: https://alice.wonderland.usc.edu/chat/alice-endpoint.html

- Helped build a Google Dialogflow chatbot for USC Libraries, based on Alice and the Cheshire Cat, from The Adventures of Alice in Wonderland by Lewis Carroll
- My role on the project was to develop the interface and backend, and to assist in the AI development. Implemented Mycroft as a Speechto-Text engine
- Used JavaEE WebSockets to allow for the non-request-response chatting.
- I was also solely responsible for developing the Desktop app of the page, and, by using Electron, I managed to create the app in 3 weeks instead of the months that developing a native app would take.
- Built, deployed and served from AWS EC2 instances. Vagrant, GitLab were used for Constant Integration

Use Case Gathering for the Library of Congress

05/2020 - 10/2020

- Participated and facilitated planning meetings for a new module to be introduced for future development
- Helped guide the conversation by giving helpful hints, reminders, creating easy to understand graphs, spreadsheets, and other methods of tracking new requirements discussion.

Development effort for the Library of Congress

05/2017 - 10/2020

Project focused on improving and extending the functionality of the various National Library Service Library of Congress systems, in particular the systems for the Visually Impaired (Braille)

- Various frontend work using Angular, JavaScript, HTML
- Helped create an encryption API integrated with AWS KMS.
  Backend work with local MySQL and MongoDB databases, as well as off-site, managed database solutions such as Voyager
- Practiced Test-Driven Development, continuously creating Unit and Integration tests with frameworks and tools like Selenium, Protractor, Sonar etc

Python Django Project for Serving a Large Database of Images

09/2017 - 05/2018

The issue of serving a large database of images (50GB), as well as their metadata (~2GB on a website in a timely manner). The images were photos of Library Catalog Cards, and the metadata was their OCR counterpart.

- Used MySQL relational database to store the Cards' OCR as well as a link to the image they related to
  Used Apache Solr for database indexing and as a quick search engine