Doria Pertea

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EDUCATION

Bachelor of Science in Computer Science • University of Maryland 05/2022

Bachelor of Science in Animal Science • University of Maryland 05/2021

SKILLS

Frontend: React, Javascript, TypeScript, JQuery, CSS, SCSS, HTML, Angular, Jest, Cypress, MaterialUI, JSX, AG Grid, D3.js, Leaflet, Mapbox, Highcharts, C#, Accessibility Best Practices (508/WCAG Compliance), Webpack, Yarn, Graphql, Vite, Storybook, Design Systems(Bootstrap/Telerik/MaterialUI/et al.)

Backend: Node.js, Java, Python, Ruby, Express, NestJS, MongoDB, PostgreSQL, SQLite, AWS

Collaboration: Adobe Photoshop, Figma, Adobe XD, Jira, Github, Bitbucket, Git, Docker

WORK EXPERIENCE

Abt Global
Rockville • 05/2022 - Present

Software Engineer

- Led the **front-end development** of multiple authenticated **Typescript/React** applications to create modernized data-collection workflows and analysis dashboards for a variety of government clients (EPA, US Army Corps of Engineers, Harvard University, Et al.)
- Produced interactive data visualizations within **reusable components** using libraries such as **Leaflet**, **Mapbox**, **Highcharts**, **D3.js** and **AG Grid**, carefully considering code-splitting, lazy loading, and virtualization to improve rendering of large datasets
- Built and maintained a **React** app integrated with a **Python** forecasting model, enabling the US Army Corps of Engineers to upload budget data, rank projects by priority, and visualize funding scenarios to guide **billion-dollar investment decisions**
- Implemented **role-based authentication** and **SSO flows** using **React Router**, **Auth0** and **Keycloak**, ensuring secure and reliable access across applications
- Led the API modernization, front-end integration, and full-stack authentication flow of an **Angular**/**NestJS**/**OracleDB** "Library" application for uploading and searching government document collections, introducing best practices such as: **SQL** query parameterization, **JWT** verification for CAC-card authentication, and incorporated an overnight **scheduled task** that performed **optical character recognition** to convert content of uploaded scanned documents into searchable text yielding **3x more relevant search results**
- Released an optimized beta version of EPA's Co-Benefits Risk Assessment tool (**Angular** frontend, **C#** backend), introduced multi-threading to the **C# API**, and **reduced worst-case run times by over 50%** while **scaling** the application to process and visualize over **30x more data**
- Developed multiple **Python FastAPI** backends with **PostgreSQL** integration for Harvard University's suite of premium web platforms, enabling institutional access to anonymized faculty job satisfaction data
- Created **staging environments** for various applications prior to production, leveraging services such as **AWS S3/EC2**, and Cloud.gov

University of Maryland (USDA DAWN Project)
College Park • 03/2020 - 05/2022

Full Stack Engineer

- Built a dynamic forecasting dashboard using **React, Material UI**, **Chart.js**, and **Google Maps API,** allowing farmers in the corn-belt to optimize crop output by visualizing agricultural predictions based on inputs like planting dates, crop types, soil conditions, and field location
- Produduced high fidelity wireframes in **Figma** to help visualize and iterate on the design of new dashboard tools
- Developed a REST API with **Node.js**, **Express**, and **MongoDB**, to support user accounts and dashboard data viewers
- Transformed large **.netCDF datasets** into structured formats using **Python Flask** in order to optimize **geographic data processing** and improve data accessibility for frontend visualizations