

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, NextJS, CSS, SCSS, Semantic HTML, Angular, MaterialUI, JSX, AG Grid, D3.js, Leaflet, Mapbox, Highcharts, C#, JQuery, Webpack, Yarn, GraphQL, Vite, Storybook, Testing Frameworks (Cypress/Jest/React Testing Library), Design Systems(Bootstrap/Telerik/MaterialUI/et al.), Web Accessibility Standards, 508)

Backend: Node.js, Java, Python, Go, Ruby, Express, NestJS, MongoDB, PostgreSQL, SQLite, Redis, Debugger, C# .NET, OracleDB

Infrastructure & DevOps: Docker, CI/CD, Amazon AWS (S3/EC2), Cloud.gov, Git, Github, GitLab, Bitbucket, Linux, Ubuntu, Bash Scripting, NPM, NVM

WORK EXPERIENCE

Abt Global Rockville • 05/2022 - Present
Software Engineer

- Architected and delivered several full stack **React/TypeScript** applications with role-based authentication (Auth0, Keycloak) and SSO integration, serving thousands of users (both public and internal) while maintaining 100% **WCAG 2.1 AA** and **Section 508 compliance for clients such as NIH, Centers for Medicare and Medicaid Services, EPA, and others**
- Optimized EPA's Co-Benefits Risk Assessment tool by introducing **multi-threading** to the **C# backend API**, reducing worst-case run times by **50%+** and scaling the application to process and visualize **30x more data** without performance degradation on the **Angular frontend**
- Built and maintained a **React** app integrated with a **Python** forecasting model via **Pyodide** and incorporated **web workers** to prevent the UI from getting blocked during long-running processes. This enabled leadership at the US Army Corps of Engineers to efficiently upload budget data, rank their portfolio of projects by priority, and then **visualize funding scenarios** over hundreds of years to make **data-driven decisions** on **billion-dollar infrastructure investments within minutes**
- Developed multiple **Python FastAPI** backends with **PostgreSQL** integration for Harvard University's suite of premium web platforms, enabling institutions access to meaningful insights and data visualizations using anonymized job satisfaction data from their faculty
- Modernized a legacy document management system from **AngularJS/Express** to **Angular/NestJS**, migrating **Oracle database** queries to use parameterization, adding **JWT-based CAC authentication**, and implemented **overnight OCR scheduled tasks** to process scanned documents that **improved search result relevance by 3x**
- Translated high-fidelity **Figma wireframes** into high-performance, pixel-perfect, responsive web interfaces, collaborating closely with designers and backend engineers to ensure seamless data integration
- Built interactive **data visualization dashboards** using **Leaflet, Mapbox, Highcharts, D3.js** and **AG Grid**, carefully considering code-splitting, lazy loading, and virtualization to render datasets with 100K+ records while maintaining smooth UI performance
- Modernized and deployed a suite of applications for the US Army Corps of Engineers, designed to help track vessel and cargo movement across US water ways using **React, GraphQL, and LeafletJS** for **route visualization and navigation notices**
- Deployed production applications to **AWS (S3, EC2)** and **Cloud.gov** using **Linux** environments, establishing staging environments and **CI/CD pipelines** for reliable releases

USDA DAWN Project (University of Maryland) College Park • 03/2021 - 05/2022
Full Stack Engineer

- Developed a responsive **React dashboard** using **Material UI, Chart.js, and Google Maps API**, allowing farmers to optimize crop output and visualize planting recommendations based on crop type, soil conditions, weather patterns, and field location
- Implemented a **RESTful API** with **Node.js, Express, and MongoDB**, then initiated a migration to **Go** to enhance API performance, concurrency handling, and maintainability
- Engineered a data pipeline in **Python Flask** to process large **.netCDF** climate datasets into optimized formats for frontend consumption, improving load times for geographic visualizations