DREW NOLLSCH

Software Engineer // NL & USA Dual Citizen

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GitHub // Linkedin // Website

TECHNICAL SKILLS

Languages & Frameworks: JavaScript, React, Material-UI, HTML, CSS, Node.js, Express, Python, Django, SQL, PostgreSQL, MongoDB, MATLAB, HTTP, JSON, XML

Infrastructure & DevOps: AWS (Elastic Beanstalk, RDS, Route 53), Google Cloud Platform (Compute Engine, App Engine, Apigee), Vercel, Heroku, Git, VS Code, Postman

Methodologies: Agile (SAFe Certified), REST, Model-View-Controller (MVC), UML, TOGAF, ArchiMate, Requirement Analysis

PROJECTS

Crater // Website // GitHub (Front-End) // GitHub (API)

Crater is a single-page application that lets users browse through DJ tracklist data aggregated from internet radio stations.

- Responsive React front-end using React-Router, Material-UI, and CSS-in-JS, deployed with Create-React-App on Vercel
- Back-end REST API using Django-REST-Framework and PostgreSQL, deployed on AWS Elastic Beanstalk, secured with HTTPS
- Sketched user flows and wireframes in Figma with a UX designer and managed work using a Kanban board and GitHub issues

Web Scraper // GitHub

This web scraper populates the Crater database with an initial dataset scraped from the NTS Radio website.

- Node.js script using Axios and Cheerio.js for HTML parsing, scraping data into a PostgreSQL database hosted on AWS RDS
- Recruited other project contributors and managed their work using GitHub issues and pull requests

Recipe App // Website // GitHub

This app allows users to submit recipes to a webpage, persists the recipes, and publishes them for other users to read.

- Vanilla JavaScript frontend following the model-view-controller pattern using JavaScript prototypes and the Fetch API
- Express back end with REST API and NoSQL database (MongoDB Atlas), deployed on Heroku

Cassini Mission Trajectory Simulation // GitHub

This MATLAB model simulates the NASA Cassini mission's trajectory en route to Saturn and includes multiple plots to visualize orbital trajectory, which included gravity-assist flybys of Venus, Earth, and Jupiter.

GPS Constellation Orbital Simulation

This MATLAB model simulates the effects of solar pressure, Earth radiation pressure, and yaw rotation effects on the GPS satellite constellation and was integrated into a Kalman filter algorithm to validate system requirements for next-generation GPS satellites.

WORK EXPERIENCE

Accenture – Technology Architecture Associate Manager (Amsterdam, NL // Feb '19 – Mar '21)

Revamped clients' architecture functions to improve software delivery processes. Client roles listed below:

Inter IKEA Systems – Enterprise Architect (Nov '19 – Mar '21)

- Defined architecture principles and best practices for application design and COTS software acquisition
- Developed a legacy application modernization framework to guide the client toward a decoupled application landscape in line with business strategy

Heineken – Global Architecture Manager (Apr '19 – Sep '19)

- Composed an enterprise capability model, enterprise conceptual data model, and architecture framework
- Produced a reference architecture for the client's Supply Chain & Manufacturing segment

Leidos – Segment Architect (The Hague, NL // Jan '15 – Feb '19)

- Developed an enterprise architecture for the NATO Ballistic Missile Defense System which was ratified by the NATO Secretary General and was the basis for a billion-euro acquisition program
- Conducted stakeholder workshops to elicit and prioritize user requirements in the program backlog
- Created functional/feature specifications and defined information exchange requirements between services
- Updated XML messaging standards to support the implementation of new interface requirements
- Designed a normalized schema for an internal data warehouse, migrated integration and acceptance test data into the data warehouse, and queried the data warehouse to produce custom views for management briefings

Leidos – System Architect (Los Angeles, USA // Jan '14-Jan '15)

- Drafted an enterprise requirement specification for the next-generation GPS Block III constellation
- Modeled GPS system architecture using UML use case, activity, sequence, and class diagrams

Leidos – Software Engineering Intern (Los Angeles, USA // May-Aug '13)

Coded software simulations as a contractor to the U.S. Air Force. See project "GPS Satellite Orbit Simulation" for details.

EDUCATION

M.S. Astronautical Engineering ('14) // University of Southern California

B.S. Mechanical Engineering ('13) // University of Southern California

OTHER

Certifications: TOGAF 9 Enterprise Architect (2016) // SAFe Architect (2020) // SAFe Product Owner, Product Manager (2020)

Awards: Director's Letter of Appreciation (2017), Team Innovation Merit Award (2016), NATO Communications & Information Agency