

# John Mulder

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## SUMMARY

Senior Full Stack Engineer with over 10 years of rich experience in designing, developing, and implementing high-performance web applications and services. Expert in both frontend and backend technologies, including React.js, Angular, Vue.js, Next.js, Nuxt, Node.js, PHP / Laravel, Python / Django, Golang, Ruby on Rails, Elixir, .NET(3.5 ~ 6.0), .NET Core, ASP.NET, VB.NET, Java, Kotlin, Microservices, Spring Boot, Unity, Redis, MariaDB, Redshift, RabbitMQ, AWS, Docker, Kubernetes, Kafka, Terraform, GCP, JWT, GitHub, Jenkins, Material UI, Twilio and MySQL, MongoDB, MS SQL, C#, Blazor. Demonstrated proficiency in creating scalable and secure RESTful APIs, optimizing database performance, and integrating complex third-party services. Skilled in Azure cloud services, including Azure APIM, AKS and Azure DevOps CI/CD, with a strong background in unit testing using RSpec, NUnit, Selenium, JMeter, Gatling, and Axe. Adept at quickly onboarding to new projects and contributing effectively from day one. Proven ability to lead development teams, ensuring the delivery of robust and user-centric solution.

## PROFESSIONAL EXPERIENCE

### Wipro | Austin, TX

*Senior Full Stack Engineer*

Aug 2022 – Sep 2024

- Developed a full-stack web application using Django, a Python-based web framework, for a caterers' food ordering and delivery platform for AI and a machine learning algorithm.
- Built a task-management and productivity web app, using React / Next.js and MongoDB.
- Created a full-stack web application using Django (Python) for the back end and Vue.js for the front end for a math schoolwork ed-tech startup.
- Developed an industrial logbook application for a large oil company to track maintenance and operation events by multiple shifts using Ruby on Rails and Elixir.
- Built an API using the Django REST Framework for a decentralized version of DoorDash, with both vendor and delivery apps connected to the API.
- Built Borealhead, an electronic daily journal app. It is a full-stack web app built with TypeScript, React, using the Next.js framework and MongoDB database, with user authentication/authorization, user data encryption, and a combination of server-side and client-side rendering.
- Developed an industrial alarm classification system for industrial events and alarms, with AI and a machine learning algorithm to identify the root cause of failures. Built using the Keras deep learning library (Python).
- Built a Tailwind / Vue.js / PHP/ Laravel app that allows groups to coordinate and manage a gift exchange. The app randomly assigns participants, allows setting certain rules and exceptions, and sends emails to participants keeping gifter-giftee assignments secret.
- Built multiple web apps using combinations of TypeScript, React, Next.js, the MERN stack, several different APIs and Material Design library.
- Built a user interface for users to keep track of their referral discounts and commissions, and claim funds periodically.
- Improved ETL processing times by optimizing data extraction and transformation steps, leveraging SQL indexing and parallel processing in .NET for faster loading of high-volume datasets.

- Created and optimized RESTful APIs and microservices, enhancing data handling efficiency and integration capabilities and improved system performance by 40% and reduced latency in data transactions.
- Crafted, configured and maintained several backend AWS services using a combination of the AWS console and SDK, as well as infrastructure-as-code deployments.
- Built a fully-featured administrative dashboard to track business and infrastructure metrics, and to perform certain backend tasks more easily using C#, .NET, .NET Core, ASP.NET, VB.NET Angular, RSpec, Selenium, JMeter, Gatling, and Axe.
- Built a full web application platform with for an insurance brokerage startup from scratch using Ruby on Rails (Sidekiq, RSpec, Puppet).
- Built a public component library published on NPM to be used by external business partners with Typescript, React, and Third-Party APIs.
- Improved CI/CD pipelines with CircleCI reduced build time, added automated Unit Test, Test Driven Development, and E2E tests with RSpec, Selenium, JMeter, Gatling, and Axe, and CircleCI checks on GitHub.
- Built and optimized backend services with GoLang, Ruby on Rails, Elixir, Java/ Kotlin and Spring Boot, enhancing performance and scalability of e-commerce platform.
- Integrated Docker, Kafka and split the back end into a microservices-based one on the proposed architecture changes from the engineering manager level.
- Implemented payment gateways including PayPal, Apple App Store, and Google Play, ensuring secure and reliable payment processing.
- Led the upgrade of Kafka clusters from version 2.6 to 3.5.
- Evaluated Redpanda as an alternative to Apache Kafka for performance-sensitive microservices and implemented a proof of concept for streaming data using its native Kafka API support.
- Developed an email feature (with AWS SES) that allows users to send emails to the application, automatically parsing the information and attachments to show it to the client in their dashboard.
- Configured client's AWS S3 buckets to be used by the back end.
- Extracted huge data information stored in the client's AWS S3 bucket.
- Created a Node.js and GCP API in AWS Beanstalk to retrieve specific data stored in AWS SimpleDB.
- Migrating Data from Google cloud data to fuze Oracle DB.
- Implemented and managed CI/CD pipelines using Jenkins and Git , automating the deployment process across AWS and GCP environments.
- Demonstrated proficiency in leveraging advanced tools and technologies, including Kubernetes, AWS, and Google Cloud Platform (GCP), enabling efficient infrastructure management and deployment of microservices-based applications.

## **PHC | Toronto, Canada**

### *Full Stack Developer*

Nov 2018 – Jun 2022

- Built a simple DApp using Web3.js on the Ethereum network. The DApp interacts with a smart contract and has a React front-end user interface. Two users can play a game and stake ether, and the winner is paid the full balance.
- Built several features of a fully-featured decentralized cryptocurrency exchange platform, including front-end trading and portfolio UI, and backend infrastructure using Django and React.
- Developed a non-fungible token (NFT) marketplace using both ERC1155 and ERC721 standards and integrated it with game play getting profit for Metaverse society.
- Architected a digital asset exchange an NFT-backed marketplace for IoT data streams that include full access control and "Stream Lambdas," functions processing data streams.
- Led the customized deployment of the marketplace for a customer from the metaverse industry.
- Took over the old source codes for the bridges and create updated builds.
- Worked on integration with various DEXs (decentralized exchanges) such as SushiSwap, Save, and Uniswap.
- Worked on liquidity mining logic, implemented in smart contracts.
- Developed series of smart contracts and integrated them into a Python/Flask application for marinate.io.
- Designed a secure cloud-based wallet solution for the marinate.io application.

- Helped with the deployment of the application on a Docker and Kubernetes cloud using Helm automation scripts.
- Developed smart contracts for token, ratings, and airdrop.
- Developed software for a so-called durable medium using Ethereum and IPFS. Built the back end using Node.js.
- Utilized gRPC for efficient and low-latency communication between blockchain nodes in DApps.
- Created smart contracts (Solidity) for mass document handling and user authentication.
- Developed software using the Angular and React frameworks.
- Created NFT tokens that allow, among other things, verification of the originality of products. The token runs on the Polygon platform. The smart contract was extended and complies with the ERC721 standard.
- Became familiar with data structures such as directed acyclic graphs (DAG) like Merkle.
- Designed and developed smart contracts for an upgradeable ERC1155-based revenue distribution platform.
- Provided white paper and detailed documentation on smart contracts and blockchain interactions.
- Developed web-based software and websites for both academic and administrative staff, including many websites with custom CMS (Kentico, Drupal, WordPress, Gatsby) capability and major projects with custom web application capability.
- Used Concora's platform to streamline the specification process to make it easier for construction professionals to download and incorporate product details directly into their project specifications.
- Managed and optimized digital product catalogs for building product manufacturers using Concora's platform
- Created a custom web application for an external client using PHP and MySQL that allows users to enter Aboriginal language verbs and automatically conjugates them.
- Designed and implemented both frontend and backend solutions using TypeScript, React, Unity, Svelte, .NET(4.3, 4.5 and 5.0), ASP.NET, VB.NET, Angular, Vue.js, PHP, Laravel, Django, Node.js, JWT, Express.js, GoLang, Java/ Kotlin, Spring Boot, RSpec, Selenium, JMeter, Gatling, Axe, and resulting in high-performance, user-centric applications that met SaaS requirements.
- Developed a template for a prototype content management system for the University of Alberta's Moodle learning management system (LMS), used by approximately 40,000 students. Selected based on prior performance on Moodle templating projects.
- Drove migration of an existing application (Angular / Laravel / PHP) into a modern application (React latest version / Node.js) to fulfill new business requirements.
- Transformed an Angular.js / Laravel application to React / Ruby on Rails (Sidekiq, RSpec, Puppet). Existing data structures and views were kept while new components were built using React and its ecosystem, specifically Redux, Saga, and others.
- Successfully integrated Temporal and into existing .NET and Java/ Kotlin applications to handle complex workflow orchestration, ensuring fault tolerance and scalability across distributed systems.
- Designed and implemented Azure APIM, Azure Data Factory and Azure Functions-based ETL pipelines for transferring data from on-premises systems to Azure SQL and Azure Blob Storage
- Proficient in working with key services like RDS for managing relational databases, S3 for scalable storage solutions, and DynamoDB and Cassandra for NoSQL database needs
- Employed advanced querying techniques and indexing strategies for PostgreSQL, Elastic Search, and Redis databases, achieving a 30% reduction in data retrieval times and improving application responsiveness and scalability
- Introduced Drupal for extensive customization through modules, themes, and configurations.
- Built ETL solutions in .NET using Entity Framework and ADO.NET to facilitate the extraction, transformation, and loading of data between disparate systems.
- Maintained the company's official website. The website was built using HTML, XML, XSLT, CSS, JavaScript, Ajax, jQuery, VB.NET and ASP.NET and was hosted in IIS servers.
- Created landing pages with forms for special campaigns, like the Christmas one using JWT, Next.js, Node.js, React, Vue.js, Angular.
- Built and maintained scalable web applications using .NET, ASP.NET, VB.NET, Java/ Kotlin, Spring Boot, React, Svelte, JWT, Node.js, Firebase, MongoDB, NoSQL, and Express.js. Developed features and functionalities that met client requirements and provided high-performance solutions
- Architected and developed a new product with TypeScript, React and NestJS with GCP, Elastic Search , GraphQL, TypeORM, Mongoose, and AWS services, to name a few.

- Created a secure chat API to be used within Socket.io inside the Azure DevOps environment.
- Extensive experience in utilizing Kubernetes clusters on Google Cloud Platform (GCP), optimizing resource utilization and ensuring high availability.
- Orchestrated containerized applications using Kubernetes on Google Cloud Platform (GCP), optimizing resource utilization and ensuring high availability.
- Involved in deploying applications onto Google Cloud Portal (GCP).

## **Creatotech | Pittsburgh, PA**

### *Full Stack Developer*

Aug 2015 – May 2018

- Planned and configured continuous integration pipeline with Gitlab/Bitbucket and CircleCI.
- Managed deployment pipelines and version control systems using Git and GitHub. Implemented best practices for code branching and merging, streamlining the release process and enhancing team collaboration.
- Developed custom plugins and themes for WordPress and Shopify, providing tailored solutions for clients and enhancing website functionality. Created dynamic, responsive designs that improved user engagement and conversion rates.
- Developed custom plugins and themes for WordPress and Shopify, providing tailored solutions for clients and enhancing website functionality. Created dynamic, responsive designs that improved user engagement and conversion rates.
- Built several custom standalone websites with content management system capability for professional use by faculty, university institutes, academic journals, and student groups, using WordPress, Moodle, and CMS Made Simple (PHP, HTML, HTML5, XML, XSLT and CSS/CSS3).
- Created a hybrid environment allowing the legacy application to live alongside the new one.
- Added a payment option by integrating with Stripe API.
- Enhanced frontend performance and user experience by optimizing JavaScript, jQuery, Ajax, CSS, XML, XSLT and HTML code. Redesigned user interfaces using React, Angular, Svelte, Laravel, and Vue.js, resulting in a 25% improvement in page load times and overall user satisfaction.
- Designed normalized relational databases for systems using PostgreSQL, Elastic Search, Redis, MySQL and SQL Server while ensuring minimal data redundancy and optimal performance.
- Implemented scalable data models for NoSQL databases like MongoDB, Redis, Elastic Search, and Cassandra. Focused on denormalized structures to support high availability and horizontal scaling, particularly in applications requiring the management of large volumes of unstructured or semi-structured data.
- Created the architecture for the web application, including the database schema, authentication and authorization, front-end framework, and styling library, as well as supporting external APIs and tools using PHP / Laravel and Vue.js.
- Developed a multi-country eCommerce app with GoLang, Shopify and React.
- Built user management, product listing, product details, and order flow, including payment integrations using Shopify and React.

## **SAP America | Newtown Square, PA**

### *Data Engineer | Junior Developer*

Sep 2014 – Jun 2015

- Assisted in developing web applications using JS (React, Vue.js, Angular), PHP (Laravel), and Python (Django).
  - Participated in product review and debugging to improve application performance.
  - Collaborated with senior developers to design and implement new features.
  - Gained hands-on experience in software development lifecycle and best practices.
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## EDUCATION

### Temple University, Philadelphia, PA

*Bachelor's Degree in Computer Science*

Aug 2010 – May 2014

- Gained a solid foundation in computer science principles including algorithms, programming, data structures design and analysis, software development methodologies, and large web services building.
  - Completed full coursework in advanced topics such as web development, database systems, and software engineering.
  - Engaged in practical projects and collaborative work enhancing problem-solving skills and technical expertise.
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## LANGUAGES

- **English**      native
  - **Chinese**      native
  - **French**      conversational
  - **Japanese**    conversational
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## SKILLS

- **Languages:** JavaScript (Vanilla JS, ECMAScript, TypeScript, jQuery, Ajax), PHP, Python, Ruby, GoLang, Rust, Solidity, C#, Java
  - **Frameworks:** React, Angular, Vue.js, Next.js, Laravel, Django, Node.js, Express.js, Ruby on Rails, Elixir, .NET, ASP.NET, Spring Boot, CMS (Drupal, Shopify, WordPress, Gatsby), Blockchain
  - **Databases:** MySQL, MongoDB, NoSQL, PostgreSQL, MariaDB, Redshift, MS SQL, GraphQL
  - **Platforms:** AWS, Azure, Google Cloud, Docker, Kubernetes, Kafka, Terraform
  - **Tools:** Git, GitHub, CI/CD, Jenkins, RESTful APIs
  - **Other:** Fluent in English and Chinese, conversational in French and Japanese
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