



Robert Deak

Available for Projects

Senior Full-Stack Developer

20+ Years Experience • React • Node.js • Python • AWS

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🔗 github.com/rdeak

Full-stack developer with 20 years of engineering experience, specializing in React, Node.js and Python. Experienced across all phases of software development—from shaping product requirements and user stories to implementation, testing, and CI/CD automation. Focused on building efficient, maintainable, and fault-tolerant applications while consistently delivering solutions that meet client needs.

Core Competencies & Technical Skills

Frontend

10 years

React (Enterprise UIs, Component Libraries, Performance Optimization), Next.js, D3.js, Design-to-Code (Figma), Dynamic Data Visualization

Backend

20 years

Node.js, Python (FastAPI), API Design (REST, GraphQL, WebSockets), System Integration (Stripe, Xero, NetSuite), Legacy Migration (PL/SQL → Node.js), Microservices, Event-driven architectures

Databases

Expert

PostgreSQL, Oracle, MongoDB, Redis, Neo4j, Elasticsearch, SQL Query Optimization, OLAP analytics

Data Engineering

Advanced

ETL Pipelines, Federated Search Engine Design, Custom Relevance Scoring, Streaming large documents, Interactive analytics dashboards

DevOps & Cloud

Certified

AWS, Docker, Infrastructure as Code (Terraform), CI/CD (GitHub Actions, GitLab, CircleCI), Monitoring & Performance (Splunk, Kibana)

Methodologies

Expert

Agile, Design Patterns, Test-Driven Development, E2E Testing (Cypress.io), RBAC design, Component-driven development

Professional Experience

Full-stack Developer

2022 - Present

Pfizer • Pharmaceuticals

KEY ACHIEVEMENTS

- Productized over a dozen machine learning models, driving multimillion-dollar cost reductions by automating complex decision-making processes at scale
- Contributed to the development of a federated search engine with Google-like capabilities, delivering fast, seamless data retrieval across diverse and heterogeneous data sources
- Architected and delivered a specialized molecular feasibility tracking application with integrated data visualizations that accelerated chemistry research workflows, significantly reducing brainstorming cycle times among research teams
- Created an OLAP-based employee training tracking system, offering real-time insights into curriculum completion rates and improving department compliance
- Engineered a dynamic workforce allocation system that optimizes employee assignment distribution across multiple divisions based on real-time availability, improving operational efficiency and resource utilization
- Built a dynamic data exploration platform that allows users to map, sort, filter, and customize views of large datasets in real time, enhancing data accessibility and user autonomy
- Developed data streaming API capable of generating and streaming large-scale documents, ensuring reliable delivery and low-latency performance under heavy load
- Built advanced interactive data visualizations, empowering stakeholders to explore complex datasets intuitively and make data-driven decisions faster
- Designed and implemented a robust Role-based Access Control (RBAC) system, enhancing platform security and enabling fine-grained user permissions management
- Improved operational efficiency and data integrity by designing a real-time, event-driven architecture for a new internal monitoring tool

TOOLS & TECHNOLOGIES

AWS,D3.js,Docker,Elasticsearch,FastAPI,GitHub Actions,GraphQL,Gurobi,Neo4j,Node.js,PostgreSQL,Python,REST API,React,Terraform,TypeScript

Architect

2024 - 2024

Cradle To Sky • Aerospace **MVP**

KEY ACHIEVEMENTS

- Developed an optimized data architecture for material flow and inter-component integration, enabling users to complete equivalent work several months faster
- Designed and implemented infrastructure as code (IaC) using Terraform to automate AWS provisioning, enabling repeatable, version-controlled environment management
- Architected and launched a new project, establishing a scalable and maintainable foundation for future development
- Built an end-to-end CI/CD pipeline with GitHub Actions, accelerating deployment workflows and shortening release cycles

TOOLS & TECHNOLOGIES

AWS,Docker,GitHub Actions,Next.js,PostgreSQL,Social Authentication,Terraform,TypeScript

Full-stack Developer

2021 - 2021

iContainers • Logistics

KEY ACHIEVEMENTS

- Migrated and refactored an entire component library to TypeScript, improving type safety, maintainability, and developer productivity
- Integrated a wide range of core REST API endpoints to power essential business functionality and ensure seamless data flow across the application
- Set up a full-featured development environment from scratch, following best practices—covering build tooling, linting, testing, Storybook, tracing, error handling, and project structure
- Transformed dozens of Figma designs into well-structured, reusable React components, ensuring visual accuracy and responsive behavior
- Streamlined the GitLab CI/CD pipeline for faster, more reliable deployments and introduced automated changelog generation to improve release transparency
- Strengthened the testing strategy by enhancing coverage and implementing end-to-end testing with Cypress.io for critical user flows

TOOLS & TECHNOLOGIES

Cypress.io, GitLab, PostgreSQL, React, Sentry, TypeScript

Architect

2021 - 2021

IntelliQuit • Healthcare **MVP**

KEY ACHIEVEMENTS

- Developed a REST API for processing and managing nicotine test image submissions
 - Applied an OpenCV algorithm to validate image content on the client side before uploading
 - Set up a project, and a streamlined deployment workflow
- Translated Figma designs into responsive, pixel-perfect UIs for both mobile and desktop
- Integrated Google Analytics and user tracking to monitor engagement and behavior

TOOLS & TECHNOLOGIES

Google Analytics, Next.js, OpenCV, TypeScript

Front-end Developer

2020 - 2022

M3G Technology • Vehicle Towing Services

KEY ACHIEVEMENTS

- Built a responsive front-end application that enables seamless customer communication through SMS
 - Integrated real-time messaging via WebSocket alongside REST API endpoints to ensure a reliable communication flow
 - Troubleshooted and resolved critical issues in a legacy Angular codebase, improving stability and maintainability
- Integrated a custom React build into a Django deployment workflow, resolving all asset bundling conflicts
- Translated full UI designs into modular, reusable React components focusing on performance, including image optimization
- Integrated Stripe payment processing into the application
- Refactored and streamlined the codebase, removing nearly 30% of redundant code and unused libraries to improve performance and maintainability
- Took initiative in laying the groundwork for a real-time user notification system to enhance user engagement
- Fixed issues on existing UI components

TOOLS & TECHNOLOGIES

Angular, Django, Docker, Python, React, Stripe, TypeScript, WebSockets

Full-stack Developer

2019 - 2021

Agility • Logistics

KEY ACHIEVEMENTS

- Implemented key business features (taking orders, shipping, tracking)
- Implemented GraphQL resolvers with Redis caching for long-term data storage and fast response times
- Contributed to the refactoring and redesigning of a large React application for improved performance and maintainability
 - Integrated external freight APIs to enable seamless third-party data exchange
 - Built reusable MongoDB repositories for cleaner data access patterns
 - Built and integrated a complex multi-step form with dynamic, interdependent fields for quoting and booking workflows
 - Migrated significant business logic from legacy PL/SQL to a modern Node.js service architecture
 - Helped containerize the application and its dependencies using Docker for streamlined development and deployment
 - Set up and maintained end-to-end tests with Cypress.io, integrated them into CI, and authored extensive test coverage

TOOLS & TECHNOLOGIES

AWS, CircleCI, Docker, Express.js, Kibana, Meteor, MongoDB, Node.js, Oracle, PL/SQL, Redis, TypeScript

Architect

2019 - 2019

Battery Learning, Inc. • Education **MVP**

KEY ACHIEVEMENTS

- Designed full application architecture for a new learning platform
- Built custom components for rich text editing and data visualization
- Implemented a SCORM generator (2004 third Edition)
 - Integrated federated authentication and authorization with the platform

TOOLS & TECHNOLOGIES

Draft.js, Express.js, Firebase, Node.js, React, SCORM, TypeScript

Full-stack Developer

2019 - 2019

Rockpapr • Fintech **MVP**

KEY ACHIEVEMENTS

- Integrated the Xero API, Stripe API, and NetSuite API
- Implemented the entire user onboarding
- Dockerized Node.js and React applications with all the dependent services

TOOLS & TECHNOLOGIES

Docker, Express.js, NetSuite, Node.js, React, Stripe, TypeScript, Xero

Architect

2009 - 2019

Privredna Banka Zagreb, Intesa Sanpaolo Group • Banking

KEY ACHIEVEMENTS

- Designed and implemented a highly scalable messaging service used by multiple customer facing applications
 - Created and implemented several key features into a application for corporate clients
 - Implemented and designed few payment processing features in corporate banking application
- Served on a team focused on integrating PBZ banking solutions for other banks in the Intesa Sanpaolo Group
- Developed several large batch processes as data engineer into a retail back-end application
- Constructed and implemented an application for processing standing orders

TOOLS & TECHNOLOGIES

Java,Oracle,PL/SQL,SOAP,Thymeleaf

Front-end Developer

2008 - 2009

Siemens • Telecommunication

KEY ACHIEVEMENTS

- Implemented several specific UI components for the Advantage platform
- Created a tool for tracking component releases and creating a changelog
- Assisted with integration testing for several internal systems

TOOLS & TECHNOLOGIES

Java,JavaScript

Back-end Developer / Data Engineer

2006 - 2008

Dialog • ERP Software Vendor

KEY ACHIEVEMENTS

- Created a B2B portal for local factory
- Implemented a reporting module for a betting web application
- Designed and implemented features on custom ERP solution

TOOLS & TECHNOLOGIES

Apex,JavaScript,Oracle,Oracle Forms,Oracle Reports,PL/SQL

Languages & Professional Attributes

Languages

English
Croatian

Fluent (C1)
Native

Soft Skills & Leadership

- Technical mentoring and knowledge sharing
- Cross-functional team collaboration
- Stakeholder communication and requirements gathering
- Problem-solving and critical thinking
- Self-motivated and deadline-driven

Education

Bachelor's degree in Economics

Financial Management

Faculty of Economics and Business (EFOS)
Osijek, Croatia

2008

Certifications

AWS Certified Developer – Associate

Amazon Web Services
August 2021

Oracle Advanced PL/SQL Developer Certified Professional

Oracle
August 2013

Oracle Database 11g: Program with PL/SQL

Oracle
December 2012

Oracle Database SQL Certified Expert

Oracle
June 2012