Dustin Engle

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Summary

Experienced Senior Software Engineer with a decade-long track record of driving results through leadership in cross-functional teams. Skilled in designing, developing, and deploying cutting-edge software solutions, I specialize in full-stack development. I excel in collaborating with stakeholders to deliver impactful projects that are both efficient and scalable. Proficient across a range of domains including AI, Blockchain, Enterprise, IoT, Mobile, and Web, I am dedicated to staying abreast of emerging technologies and industry trends. Renowned for strategic problem-solving abilities and a steadfast commitment to maintaining code integrity.

Experience

Senior Software Engineer   Warner Bros. Discovery
October 2021 - December 2023   *Remote*

- Provided mentorship and conducted code reviews for teams, facilitating knowledge transfer and ensuring adherence to Java and enterprise architecture best practices, resulting in accurate implementation of design documentation.
- Led the development and management of architectural design documentation (ADD) for the global territory-based targeting system, enabling the successful launch of Max in Latin America, Europe, and beyond. Utilized Java Vert.x framework and PostgreSQL database.
- Spearheaded the creation of a high-throughput suppression service for Max, handling over 100k requests per second (RPS) with Java in SpringBoot. Drafted Service Level Objective (SLO) documentation for effective monitoring and alerting setup.
- Orchestrated the delivery of a critical content promotion scheduling service for Max, facilitating event publication to Kafka from a Java SpringBoot microservice.
- Directed the development and rollout of a cost-saving content generation system, serving House of the Dragon content to 9.98 million viewers on HBO Max. Leveraged DynamoDB, Redis, PostgreSQL, and Node.js with Typescript.
- Engaged in weekly on-call rotations for HBOMax and Max, including pivotal release on-calls such as House of the Dragon and the Max platform launch in the USA.
- Played a key role in automating Terraform deployments of Kubernetes to AWS and configuring Docker Compose setups for local development.
- Implemented and oversaw the establishment of robust observability practices for all content discovery team services, encompassing metrics visualization, logging, and alerting aligned with Service Level Agreements (SLA) or SLOs.

Principal Engineer   Dome Global
February 2022 - September 2022   *Remote*

- Designed and engineered a versatile cross-platform SDK featuring a functional interface capable of supporting various compilation outputs, including WebAssembly (WASM).
- Spearheaded the design and development of a WebAssembly (WASM) wallet tailored to interact seamlessly with Ethereum (ETH) and other ERC20 tokens. Additionally, integrated native WebSocket support for real-time event consumption from ETH and related services such as Infura.

Chief Technical Officer   Pagarba Solutions
January 2021 - September 2021   *Remote*

- Provide robust leadership and foster effective interdepartmental communication to consistently achieve or surpass project timelines and financial objectives.
- Act as a pivotal liaison between operations and information technology (IT) departments, driving the identification and execution of solutions to address challenges in deploying international platforms.
- Champion the implementation of initiatives yielding substantial cost reductions while enhancing and modernizing technology infrastructure to elevate customer satisfaction.
- Offer hands-on project management expertise and contribute as a vital member of the technology strategy team, specializing in framework architecture.
- Define comprehensive business processes, application requirements, and technological needs across various business units.
- Facilitate communication and negotiation efforts to foster alignment between business and technology teams.
- Demonstrate proficiency in understanding core business processes, identifying technologies to optimize operations, and driving enhancements accordingly.
- Direct efforts towards developing tools for knowledge management, workflow optimization, document and content management, search capabilities, and web-based collaboration.
- Oversee multiple projects and initiatives throughout their entire life cycle, overseeing aspects such as staffing, design/architecture, modeling, budgeting, and execution.
- Provide direct consultation to clients as a senior technical architect, guiding the design and implementation of innovative technologies.
- Conduct technology audits to ensure clients leverage optimal methodologies and tools to achieve their business objectives.
- Develop comprehensive budgets and work plans for the development and deployment of technical infrastructure.
- Create and execute project plans, ensuring adherence to stringent timelines and financial targets.
- Formulate short- and long-term strategies tailored to address client requirements and adapt to dynamic market conditions.
- Collaborate closely with product managers and development teams to integrate new features and extend product functionalities.

Senior Blockchain Engineer   Pagarba Solutions
February 2019 - January 2021   *Remote*

- Spearheaded the architecture and development of a DIY IoT blockchain marketplace system upon joining, leveraging proven cryptographic techniques to ensure end-to-end security. Customized an IoT gateway system to seamlessly integrate with blockchains, and engineered a fault-tolerant multithreaded Python interface to the platform. (Tags: MainFlux, IoT, Go, Python 2, Docker, Docker-Compose, PostgreSQL, Redis, InfluxDB, Cryptography, AWS)
- Designed and implemented a GPS tracking system integrated with an IoT mesh network utilizing the ESP8266 microcontroller, alongside a user-friendly interface for network management and visualization. (Tags: C/C++, Arduino, ESP32, LoRa, WiFi AP/STA, Gossip-like MeshNetworking Protocol, GPS, React, Cryptography)
- Contributed to the winning solution for the 2019 AngelHack CallForCode challenge, focusing on an emergency response system based on cellular networks. Provided architecture and development support for 2G, 3G, and LoRa IoT communication with other mobile devices. (Tags:

C/C++, SQLite3, Python 2, LimeSDR, Osmocom, ESP32, 2G, 3G, GPRS, GSM, Abis/IP and 3GPP AoIP, HLR, M3UA, SUA, GTP, BTS, BSC, MSC, HLR, STP, PCU, Cryptography)
- Supported the launch of a nurse staffing application and developed a mobile app enabling geolocation-based search results for participating hospitals, currently available on Apple and Google platforms. (Tags: Python, Django, MySQL, React, React-Native, Docker, AWS, Terraform, Expo, Bitbucket Pipelines, Cryptography)
- Engineered an API and mobile app allowing for anonymous reporting of gunshots, available on Google Play. (Tags: PHP, Slim, React, React-Native, Redux, Expo)
- Led the design, development, and management of a team in creating an AI-powered mobile app for Lego part recognition and automated notifications for new Lego sets. Utilized OCR to scan Lego instruction manuals and add pieces to inventory. (Tags: Go, Python 2, Tensorflow, Tensorflow.js, React, React-Native, SQLite3, PostgreSQL, Tesseract, tfjs-react-native, Expo)
- Established a process for generating simulated real-world training data for Lego piece recognition using CAD-generated images by LDraw. (Tags: Python 2, scikit-image, LDraw, Tensorflow)
- Developed a Byzantine Fault Tolerant Distributed Ledger (Blockchain) for an IoT lock and tracking startup client. (Tags: Go, Tendermint, CosmosSDK, Redis, Python 2, React, React-Native, PHP, Stripe, QR, Cryptography)

Blockchain/Full-Stack Engineer   Bulwark Cryptocurrency
January 2018 - February 2019   *Remote*
- As a seasoned blockchain development lead, I possess extensive expertise spanning proof-of-work and proof-of-stake algorithms, cryptographic hashing, sporks, governance mechanisms, hard/soft forks, quality assurance protocols, and privacy-enhancing technologies such as zerocoin, TOR/I2P integration, and database systems (LevelDB, IPFS, etc.) across multiple languages including C, C++, Go, and Python.
- Serving as the lead developer for BWK-Dash, I spearheaded the creation of an interface for Bulwark's Secure HomeNodes, enabling the deployment of a hardened masternode version on IoT devices. Leveraging Go, React, and SQLite for database management, I ensured a robust and secure solution.
- Actively contribute to and oversee the research and development of all open-source and hardware projects, fulfilling roles as a product owner, scrum master, and developer within Scrum teams. My guidance and management play a pivotal role in driving innovation and fostering collaboration within the organization.

Full-Stack Engineer   Tagrem
May 2016 - January 2018   Remote
- Orchestrated the development of a comprehensive framework of React components, encompassing form validation, fetch request buffering, client-side caching, and automation of redux async scripts.
- Demonstrated leadership as a team lead, collaborating closely with designers and developers to successfully deliver high-traffic multi-tenant systems, employing Angular (Angular Material, Bootstrap) and React (Redux, React Router, Redux Thunk, WHATWG Fetch).
- Implemented and configured Continuous Integration (CI) using Jenkins, established Git repository systems (GitLab), and seamlessly integrated issue tracking (JIRA) and communication platforms (Slack).
- Established and optimized project build and deployment procedures, leveraging Gulp, Webpack, Jenkins, Webhooks, and Bash scripting to streamline processes.
- Conducted thorough code reviews with the development team, actively participated in daily scrum meetings, and played a key role in the onboarding and training of new team members.

- Developed a Java file migration script, integrating PostgreSQL for seamless data migration, and facilitated binary image uploading for enhanced functionality.

Software Engineer   BillPeople
February 2014 - May 2016   Remote

- Spearheaded the development of a sophisticated real-time automated support call center system utilizing Node.js, Meteor, MongoDB, Handlebars, and Mustache templating. Integrated seamless connectivity with Asterisk/AMI, billing software powered by Node.js and Microsoft SQL, as well as MikroTik WiFi access points, enhancing operational efficiency and customer service.
- Conceptualized and executed the design and development of a feature-rich mobile application leveraging PhoneGap, Ionic framework, and SQLite database. The application serves as a vital interface for remote technicians to interact with the Bill People support system API. Key features include push notifications, robust local caching, seamless photo capturing and uploading capabilities, intelligent online/offline connectivity management, and geo-fencing functionality for technician check-ins, optimizing field operations and service delivery.

Webmaster   Schat Communications
January 2013 - January 2014   Bishop, CA

- Engineered a comprehensive restaurant drawer closeout system utilizing PHP, MySQL, and the MVC architecture, complete with robust reporting functionalities and a tailored Domain Specific Language (DSL) for streamlined validation and reporting workflows.
- Successfully transitioned a server data center environment from Microsoft SQL, Exchange, and Active Directory to a Linux-based virtualized infrastructure, employing CentOS, ProxMox, and KVM technologies. Implemented a resilient backup system utilizing ProxMox and NFS for enhanced data protection.
- Designed and implemented migration scripts and automated systems in Python to facilitate the seamless transition from one support system (Rodopi) to another (Deskpro), ensuring minimal disruption and optimal efficiency.
- Developed multiple WordPress and Joomla sites tailored to the specific needs of ISP customers, enhancing their online presence and functionality.
- Crafted a custom WordPress plugin in PHP and MySQL to facilitate gateway and access point management for ISPs, incorporating essential geolocation features.
- Spearheaded the development of a ColdFusion-based CMS for a local mountain engineering guide company, providing them with a tailored solution for content management.
- Engineered a bespoke online store powered by PHP and MySQL, integrated with PayPal for seamless payment processing. The development of a custom MVC framework in PHP tailored specifically for this project ensured optimal performance and scalability.
- Contributed to the success of a local real estate company by developing a comprehensive online property management system using PHP and MySQL, featuring seamless integration with MLS data via the CodeIgniter framework.

PREVIOUS SOFTWARE AND MILITARY EXPERIENCE AVAILABLE ON REQUEST

Certifications

[Certified in Cybersecurity](#) ISC2	April 2024
[Getting Started with AI on Jetson Nano](#) Nvidia	November 2023
[Tensorflow Developer Specialization](#) DeepLearning.AI	May 2023
[Data Structures and Performance](#) University of California San Diego	May 2017
[Object Oriented Programming in Java](#) University of California San Diego	May 2017

Skills

Languages:
Bash, C, C++, C#, CSS, Dart, Go, Java, JavaScript, PHP, Python, Rust, SASS, TypeScript, Visual Basic

UIs:
Angular, Bootstrap, Expo, Flutter, HTML, Ionic, jQuery, QT, React, React Native, Tkinter, Vue, WinForms

AI:
CUDA, DLib, Keras, ONNX, OpenAI, OpenCV, PyTorch, scikit-learn, TensorFlow, Tesseract, TFLite, Ultralytics

Databases:
Badger, LevelDB, MariaDB, Milvus, MongoDB, MS SQL, MySQL, PostgreSQL, Redis, SQLite3, Supabase

Frameworks:
CodeIgniter, FastAPI, Flask, Gin, Laravel, Meteor, Micronaut, .NET, Spring Boot, Vert.x

Blockchains:
Bitcoin, ChainLink, Cosmos SDK, Custom, Ethereum, PIVX, Ripple, Stellar, Tendermint

Providers:
AWS, Azure, GCP, Hetzner, Linode, Oracle, Scaleway

Concepts:
Agile, CI/CD, Kanban, KPI, OKR, Scrum, TDD, XP

Software:
Confluence, Git, Jenkins, JIRA, Linux, Windows