

# DUSTIN ENGLE

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## Pagarba - Chief Technical Officer (CTO)

Jan. 2021 - Present (Remote)

- Provide **strong leadership** and effective interdepartmental **communication** to effectively meet or exceed all project timelines and budgetary goals.
- Serve as a liaison between operations and information technology (IT) to identify and drive implementation of **solutions** and **resolve issues** surrounding the complex deployment of international platforms.
- Consistently implement programs that result in substantial **cost savings** while improving and **modernizing** technology infrastructure to better serve customer needs.
- Provide hands-on **project management** and served as a key member of the technology strategy team specializing in **framework architecture**.
- Define **business process**, application, and technology requirements for multiple applications across all business units.
- Facilitate communications and negotiate with team members to build alignment between **business and technology** groups.
- Understand core business processes and identified technologies to support and enhance operations.
- Focused primarily on the development of tools for knowledge management, **workflow**, document & content management, search, and web-based collaboration.
- **Managed multiple projects** and initiatives throughout the entire project life cycle; held full responsibility for project **staffing, design/architecture, modeling, budgeting, and execution**.
- Consulted directly with clients as a **senior technical architect** to design and implement new technologies.
- Performed technology **audits** to ensure clients took advantage of best methodologies and tools to meet **business objectives**.
- Generated full budget and work plan for development and implementation of the technical infrastructure.
- Generated **project plans** and ensured that strict timelines and **budgetary goals** were successfully met.
- Developed short- and long-term strategies to address client needs and unique **market requirements**.
- Coordinated with product managers and development teams to implement new features and product extensions.

## Pagarba - Senior Blockchain/Software Engineer

Feb. 2019 - Jan. 2021

- Upon immediate start, I assisted in the **architecture and development** of a DIY IoT blockchain marketplace system that utilized proven cryptographic techniques to provide end to end security, customized an **IoT** gateway system to integrate with blockchains, and developed 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 developed a GPS tracking system that integrates with an IoT mesh network system using the ESP8266 microcontroller and UI to view and manage the network. Tags: **C/C++, Arduino, ESP32, LoRa, WiFi AP/STA, Gossip-like Mesh Networking Protocol, GPS, React, Cryptography**
- Participated in the 2019 AngelHack CallForCode challenge where my team provided an emergency response system based on cellular networks, and **WON**, in which I provided architecture and development support for 2G, 3G, and **LoRa IoT** that could communicate 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 created a mobile app that allowed for geolocation-based search results for hospitals participating in the platform that is currently deployed on **Apple** and **Google**. Tags: **Python, Django, MySQL, React, React-Native, Docker, AWS, Terraform, Expo, Bitbucket Pipelines, Cryptography**
- Engineered an API and mobile app that allowed for anonymous reporting of gunshots by users that is currently on **Google Play**. Tags: **PHP, Slim, React, React-Native, Redux, Expo**
- Designed, developed, and managed a team in the development of an AI-powered mobile app that provides Lego part recognition and automated notifications when new Lego sets can be built. Lego instruction manuals are scanned using OCR to add the entire set of pieces to the inventory. Tags: **Go, Python 2, Tensorflow, Tensorflow.js, React, React-Native, SQLite3, PostgreSQL, Tesseract, tfjs-react-native, Expo**
- Creating a process to simulate real-world training data for the Lego piece recognition model using CAD generated image by LDraw. Tags: **Python 2, scikit-image, LDraw, Tensorflow**
- Created a Byzantine Fault Tolerant Distributed Ledger aka Blockchain for an IoT lock and tracking based startup client. Tags: **Go, Tendermint, CosmosSDK, Redis, Python 2, React, React-Native, PHP, Stripe, QR, Cryptography**

**Bulwark - Blockchain/Full-Stack Developer**

Jan. 2018 - Feb. 2019 (*Remote*)

- As a blockchain development lead, my experience ranges from proof-of-work and proof-of-stake algorithms, hashing, and other cryptography algorithms, sporks, governance, hard/soft forks, quality assurance, **zerocoin, TOR/I2P**, and database systems (**LevelDB, IFPS**, etc.) in **C, C++, Go** and **Python**.
- As the lead on the new blockchain explorer, I managed guest developers tasks, provided code reviews, interacted with the design team to deliver on the vision, architected the system utilizing JavaScript full-stack (**Node.js, Express, Mongoose/MongoDB, React, Redux, SASS**), and provide overall management of the open-source project.
- Lead developer for BWK-Dash which provides an interface to Bulwark' Secure Home Nodes that run a hardened master node version on an IoT device in **Go, React**, and using **SQLite** for a database.
- Provide guidance, management, and participation in the research of all open source and hardware projects.
- Function as a product owner, scrum master, and developer in **Scrum** teams.

**Tagrem - Full-Stack/Software Developer**

May 2016 - Jan. 2018 (*Remote*)

- I constructed the entire framework of **React** components including forms with validation, fetch request buffering, client-side caching, and redux async script automation.
- As a team lead, working in conjunction with designers and developers to deliver high traffic multi-tenant systems in Angular (**Angular Material, Bootstrap**) and React (**Redux, React Router, Redux Thunk, WHATWG Fetch**).
- Setup and configured CI (**Jenkins**), Git repository system (**GitLab**), and integrated with issue tracking (**JIRA**) and chat system (**Slack**).
- Setup and configured project build and deployment processes utilizing **Gulp, Webpack, Jenkins, Webhooks**, and **Bash**.
- Lead code reviews with the development team and participated in daily scrums and assisted in the training of new team members.

- Wrote **Java** file migration script with **PostgreSQL** and binary image uploading.

**Bill People** - *Software Engineer/Architect*

Feb. 2014 - May 2016 (*Remote*)

- Engineered a real-time automated support call center system (**Node, Meteor, MongoDB, Handlebars, Mustache**) with connectivity to **Asterisk/AMI**, billing software (**Node, Microsoft SQL**), **MikroTik** WiFi access points (**Node**) and email (Node - **POP3, SMTP**).
- Designed and developed a mobile app (**PhoneGap, Ionic, SQLite**) for remote technicians to interface with the Bill People support system API. The app includes push notifications, local caching, photo-taking, online/offline connectivity handling, image uploading, and geo-fencing for technician check-ins.

**Schat Communications** - *Software Developer*

Jan. 2013 - Jan. 2014 (*Bishop, CA*)

- Developed a restaurant drawer closeout system (**PHP, MySQL, MVC**) with reporting and a **DSL** (Domain Specific Language) for custom validation and reporting workflows.
- Converted server data center (**Microsoft SQL, Exchange, Active Directory, IIS**) to a Linux based virtualized infrastructure (**CentOS, ProxMox, KVM**) and set up a backup system (**ProxMox, NFS**).
- Created migration scripts and automated system (**Python**) for converting from one support system (**Rodopi**) to another support system (**Deskpro**).
- Developed several WordPress and Joomla sites for customers of the ISP.
- Made a **WordPress (PHP, MySQL)** plugin to handle updating and minor geolocation functions for ISP gateways and access points.
- Developed a CMS in **ColdFusion** for a local mountain engineering guide company.
- Built a custom online store (**PHP, MySQL**) that interfaced with **PayPal** for payment handling. The MVC framework (**PHP**) was custom built by me for this project.
- Helped a local real estate company by developing an online property management system (**PHP, MySQL**) with **MLS** integration using the **CodeIgniter** framework.

**Military and previous civilian experience available upon request.**