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Alex

TECHNOLOGIES

Vue.js • React.js • Web3.js
Node • AWS (Certified) • Docker • Kubernetes • MongoDB
Hyperledger • Git • Linux
Truffle • TensorFlow • Scikit-learn • Selenium • Geth

DESIGN

Sketch • Illustrator • Photoshop
Figma • Sass/CSS • HTML

EXPERTISE

Blockchain • Ethereum • PaaS
Signal Processing • Machine Learning • Blockchain • Natural Language Processing • Control Systems • Embedded Systems

LANGUAGES

JavaScript/ES7 • TypeScript
Python • Golang • C • C++
C# • Java • Solidity • Obj-C

AWARDS

- Harvard Innovation Fellow
- Slavin Foundation Fellow
- 'The Investment' Finalist
- PennTap Learning Factory Grant
- Erickson Discovery Grant
- Whitman Endowment
- 1st Place at HackPSU

FREE TIME?

Music (Guitar, Clarinet, Piano, Production) • Tennis (USTA 5.0)

Soccer • BathtubVineyards.com

EDUCATION

Harvard University *Blockchain Innovation Fellow* September 2018 —

Penn State University *B.S. Computer Science* Class of 2018

PROFESSIONAL EXPERIENCE

Squarelink.com: *Co-founder, CTO* Sept 2018 —

- Built the first non-custodial cryptocurrency wallet allowing users to sign in, sign transactions, and recover accounts with just an email and password
- Drafted patent application and recieved allowance from USPTO on claims for "Technologies for Private Key Recovery in Distributed Ledger Systems"
- Architected and developed a standard OAuth 2.0 provider for 3rd party applications to interact with Squarelink users via our REST API
- Wrote and published the "squarelink" npm package, allowing DApps to install Squarelink as a standard Web3 provider in web3.js
- Created a developer console for 3rd party developers to register and manage applications with Squarelink along with documentation for Squarelink's API and SDK
- Facilitated the integration of Squarelink's SDK into 50+ applications including Totle Swap, Ethfinex, Pool Together, 1inch Exchange, and Web3Connect
- Designed Squarelink Event Pass, a secure alternative to Burner Wallet to help quickly and easily onboard non-traditional users into the crypto space.
- Launched a PoC for Event Pass at ETHBoston to provide Point-of-sale tools for vendors to accept 1700+ crypto payments from 500+ attendees ($20,000+ in value)

Musical Minds: *Founder, CEO* Nov 2015 - Sept 2017

- Directed 20 employees in the creation of a music-for-wellness recommendation engine powered by proprietary brainwave-sensing headphones
- Developed a Python REST API using AWS ElasticBeanstalk, AWS Cognito, Sanic, DynamoDB, and Apache Spark for collaborative filtering-based music recommendations
- Designed EEG biopotential amplifiers using Multisim and developed a DWT/SVM mental state classifier using C++/Tensorflow embedded on a TI-CC430 MCU
- Leveraged music streaming APIs and SDKs for in-app music playback on iOS and Android
- Garnered $21,000 in non-equity financing through several grants, competitions, and awards

Microsoft: *Student Partner to Penn State* Aug 2015 - May 2018

- Organized 23 tech workshops on MS developer tools for college students
- Mastered tools including Azure, Project Oxford, Windows IoT toolkits, etc
- Volunteered at public schools through "Hour of Code" to teach young students how to code

Optum: *Software Development Intern* May - Aug 2017

- Developed a natural language understanding API and integrated it with complex internal business tools to simplify navigation using Flask, RASA, SPARQL, Docker, and ElasticSearch
- Built an AngularJS UI for centralization of UnitedHealth patient information between doctors

Lunar Lion: *Guidance, Navigation, and Controls Lead Engineer* Apr 2015 - Jan 2016

- Directed 35 students in the development of five software/hardware subsystems including flight software, ground controls, modelling and controls, systems testing, and visual guidance
- Interfaced with craft sensors using C/C++ embedded on Arduino and RTD controllers
- Prototyped an Arduino and C#/WPF Ground Control Station for command transmissions
- Implemented a monocular surface reconstruction algorithm leveraging parallax motion of lunar surface features and spline interpolation for landing sequence adjustment using C++/OpenCV