James Kavanaugh

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Software Engineer

Skilled bilingual software engineer with 20 years experience leading diverse high-performance teams.

Projects

- **Marine construction permitting system**: Client relationship management (CRM) application implemented with Typescript, React, AWS, websockets, and MongoDB to manage multi-year permitting processes.
- **Web socket framework**: Typescript and Node.js web socket framework with message schema validation to enable real-time synchronization of web applications and maintain data consistency.
- **Encrypted synthetic data research**: Python and C++ based research using homomorphic encryption and differential privacy to maintain privacy of sensitive datasets while generating synthetic data.
- **Computer vision application**: C++, OpenCV and Tensorflow models to monitor RTSP camera streams, with macOS and tvOS client applications to view home security camera and insights.
- **Request for quote application**: Cloud-native AWS application written in Typescript, React, Next.js that uses AWS Amplify, DynamoDB to streamline requesting and comparing vendor quotes.
- **Space Time**: Native iOS and watchOS application with AWS Amplify and GraphQL backend to help users visualize time linearly instead of as a cycle to create urgency. Memento mori.

Experience

President and CEO (Owner)   North Slope Software   2022-2024

- Responsible for business development, user experience design, software engineering, security, and DevOps.
- Designed and implemented a custom CRM application for a local marine construction company, which increased efficiency and reduced errors for the client saving $50,000 over the product lifetime.
- Developed a WebSockets framework for the browser and Node.js to synchronize web applications and facilitate real-time collaboration.
- Deployed web applications to AWS using AWS Amplify, EC2, S3, Route53, and other services to decrease fixed costs and increase reliability.
- Conducted business development to create partnerships with overseas software developers in India, Taiwan, and Brazil to extend North Slope Software's capabilities while cutting future development costs in half.
- Initiated customer and product development for a cloud-based computer vision service augmented by edge devices using TensorFlow, AWS, Python, C++, Next.js, and DynamoDB to provide delegated awareness for IP cameras.

"Green Beret" Master Sergeant, U.S. Army   1st Special Forces Group (Airborne)   2004-2024

Indo-Pacific Regional Program Manager (18Z)   Washington and overseas   2020-2024

- Led a diverse multidisciplinary staff to manage joint special operations teams in seven Asian countries.
- Responsible for all advanced special operations in the Indo-Pacific theater, including 182 missions, increasing successful operations by 200% after COVID restrictions lightened.
- Mentored and developed leaders and technicians on high-performing teams to achieve strategic objectives.
- Responsible for written communication and briefings to synchronize operations with senior leaders' intent.

Operations Manager (18Z)   Washington and overseas   2018-2020

- Managed a high-performance, multifunctional, and highly specialized special forces detachment.
- Responsible for training, mentorship, and professional development for a Special Forces operational detachment.

Assistant Operations Manager (18F)   Washington and overseas   2012-2018

- Responsible for data mining, analysis, and targeting to plan tactical operations for a Special Forces detachment.
- Worked cooperatively with Iraqi, Philippine, Afghani, Korean, and Thai military partners on mutual goals.
- Gained working proficiency in Mandarin Chinese during two language exchange trips to Shenyang, China.

Skills

Project Management	Communication	Agile Development	Strategic Planning	Machine Learning
C / C++	Python	Javascript	Typescript	Node.js
React / Next.js	AWS	Postgres (SQL)	MongoDB (NoSQL)	Git

Education

M.S. Computer Science and Systems	University of Washington	December 2024
B.S. Software Engineering	Arizona State University	2022
Intensive Second Year Chinese Program	University of Washington	2013