Backend Software Engineer Greater Boston
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Jesse is an accomplished individual contributor with 13 years of industry experience and a passion for both mentoring engineers and designing scalable solutions. Jesse's accomplishments include:

- **Transforming ambiguous problems into well-defined solutions**, and ensuring seamless implementation and mitigating project risks.
- **Prioritizing reliability and scalability in event-driven distributed systems**, resulting in high-performing, deterministic, cost efficient, and adaptable architectures.
- **Elevating team performance and engineers' capabilities via mentoring** and strategically identifying work that aligns with current skill levels.
- **Leading and motivating a team of five engineers**, driving project success through effective leadership, coordination and accountability. Teacher of all engineers.
- **Providing regular stakeholder updates** to maintain transparency and alignment. Jesse Identifies and corrects deadline misses early-on with comprehensive estimation techniques and resource allocation.
- **11 years of experience with Node.js & Mongo**, contributed to Node.js.

Experience

March 2022 - April 2023
Meta, NYC, remote – *Senior Software Engineer, Backend*
Lead of kustomer platform automations team (Workflows, Business Rules, Queues & Routing), Jesse provides direction for integral initiatives and is ultimately responsible for high-impact projects.

- **Saved $10k/mo and reduced bug count by 97%** in the distributed routing system. Results derived from two projects proposed and led by Jesse that were delivered in parallel. (5 engineers x 6mo)
    - Projects: Remove reverse syncing, Extend update pattern to blend commands & composite pattern
    - Node.js, Mongo, Distributed Event Driven Systems, Race Conditions, Commands pattern, Composite pattern
- **Resolved core product bottleneck** by implementing a highly reliable and scalable solution architected in collaboration with the engineering director of kustomer @ Meta. This solution distributed the workload evenly throughout the hour and enforced rate limits on operations, relieving the bottleneck while protecting the backend services. (3 engineers x 9mo)
    - Surpassed adoption goals, reaching 2k organizations, exceeding the targeted milestone of 1k in Q1'23.
    - Node.js, Mongo, Distributing load, Serial execution, SQS visibility timeout window
- **Led in-depth investigation of denial of service vulnerability**, successfully identifying root causes and implementing preventive measures. (1 engineer x 2mo)
    - Discovered retry loops and resource starvation as the underlying issues
    - Implemented effective solution by introducing an object size limit
    - Overcame misleading clues posed by resource starvation symptoms to successfully resolve the issue
    - Datadog, Kibana, SQS, S3, Event Driven Architecture
- **Mentored L4 engineer to promotion,** providing guidance on adapting to ambiguity and shifting from a task-oriented to a goal-oriented mindset
    - Focused on quality of work and project leadership skills through mentorship and support
    - Worked with EM to calibrate increases in mentee's responsibility, providing valuable insights over time into the mentees progress and blind spots
- **Conducted an org-wide presentation on Node.js,** delivering comprehensive insights on the event loop, thread pool, concurrent programming, recursion, and blocking operations
    - Engaged a large audience of 300 viewers during the presentation
    - Received overwhelmingly positive feedback for the informative and engaging session
- **Enhanced team-wide expertise** by taking the lead in conducting weekly knowledge-sharing meetings
    - Covered various topics including event-driven architecture patterns, SQS visibility timeout, and monitoring tool capabilities
    - Facilitated learning and knowledge exchange within the team, promoting a culture of continuous growth and development
- **Elevated developer confidence org-wide** by extensively enhancing and improving accessibility of existing and automated integration testing suite and pushing test driven development
    - Revamped the suite to ensure comprehensive coverage, reliability and ease of use in testing processes
    - Boosted overall software quality and reliability through the tremendously easy-to-use integration testing suite

"Jesse has a tremendously positive impact on the team and the platform due to his robust amount of knowledge around the routing system and overall automations domain and his willingness to share. He is one of the most patient and knowledgeable engineers I've had the pleasure of working with." - Eric Zorn, L5, Meta, Mentee

Nov 2020 - March 2023
Kustomer, NYC, remote – *Senior Software Engineer, Backend*
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JAN 2013 - NOV 2019
Meltwater News, NH – *Senior Software Engineer, Fullstack*
Full stack engineer and Lead of an agile team leveraging Node.js, Angular.js, and MongoDB to develop highly scalable solutions deployed on Amazon Web Services (AWS).

- **Joined the company as a junior developer** and demonstrated continuous growth and development, advancing to the role of senior engineer and ultimately team lead within a span of 7 years.
  - Consistently exceeded performance expectations and took on increasing responsibilities, showcasing strong technical expertise, leadership skills, and a commitment to personal and professional growth.
- **Increased deployment frequency** by leading the successful migration of a frontend codebase from a monolithic repository to a micro frontend architecture. Required significant dependency adjustments and research into hosting a shared navigation system.
- **Led the migration of the front end of a business application to AWS Elastic Beanstalk**, significantly reducing front end deployment time from 1 hour to 15 minutes.
- **Reduced development lifecycle** by automating management of feature environments based on git hooks. Allowed stakeholders to see development in progress and give feedback earlier.
- **Developed a highly scalable and reliable event-driven email pipeline,** efficiently sending 0.5 million emails per day with all emails delivered within 2 minutes at peak hours.
- **Automated GDPR compliance through scripting**, drastically reducing ticket resolution time from 30 minutes to 30 seconds.
- **Strategically removed multiple 40-gigabyte MongoDB collections without down time** using a smart page and walk strategy, successfully avoiding database lockups and ensuring zero customer downtime.

JULY 2010 - JULY 2013
Interoperability Laboratoratory, Durham NH – *Developer and Test Technician*

- **Created DHCPv6 server test suite** in adherence to RFC-3315 specifications for the core product. UAT's plug into test-bed and suite is executed; Routers that pass get DHCPv6 certification.
- **Fostered a deep understanding of networking fundamentals** including DNS and DHCP concepts, the limits of IPv4 versus IPv6, and the OSI 7 layer model.
- **Acclimated to common unix concepts** such as process, file, and network management. Familiarized myself with unix commands and bash scripting.

Education

JULY 2010 - JULY 2013
University of New Hampshire, Durham NH – *B.S. in Computer Science*

- Programmed in Java, C/C++, JavaScript, and Python
- Simulated thread context switching in C and Assembly language; saving the state of a thread and loading the context of another thread before resuming execution
- Courses: Artificial Intelligence, Algorithms, Data Structures, Computer Networks, Graphics, Assembly Language & Machine Organization, Operating System Fundamentals, and Advanced Object Oriented programming

Projects

JULY 2022 - PRESENT
DashMobile – *Scrape your favorite websites for your favorite content, and then view it all in one place.*
React native app supported by node.js functions in aws lambda and using Dynamodb caching.

- **React native app that scrapes my favorite websites dynamically**, so I can see the live music happening nearby.
- **Back end:** github.com/jessekoconnor/server-side-slinger, scrapes live data on each invocation saving a user 15 mins/day by scraping up-to-date info on local venues websites. Implemented with nodejs and lambda functions that utilize puppeteer
  - **Leverages a slim chromium version below lambda function size limit**
  - **Extracts data from web pages using puppeteer**, waits for a selector before it starts scraping
  - **Different sites run in parallel lambda functions at the same time** for maximal performance
  - **Cache results for one day** to avoid abusive behavior toward local businesses websites
  - **Skillfully parses date strings in a wide range of formats**, ensuring comprehensive compatibility with nearly any date format

- - **Supports recursive and iterative scraping configuration** by accumulating results in a recursive and iterative manner to create extremely powerful configuration objects
- **Front end:** github.com/jessekoconnor/WebSurfer, Implemented in react-native as a mobile application, compatible with both IOS and Android. Front end utilizes google material design
- **Download app here**:
  - IOS - Testflight: https://testflight.apple.com/join/br5KTP6i