

## EXPERIENCE

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|--|-------------------------------|------------------------------|
| <b>Senior Software Engineer II</b>   | <b>Amplitude</b>              | <b>June 2022 - Present</b>   |
| <ul style="list-style-type: none"><li>• Tech-lead for Recommendations/Predictions and built infrastructure for Kafka based Data Pipeline.</li><li>• Expanded the Recommendations product to cache hourly results in DynamoDB table to provide single digit millisecond lookups, reducing latency for APAC customers by 50% and winning a \$500K contract expansion.</li><li>• Redesigned ML jobs with new cache for Recommendations product to handle nightly spike of 20K TPS.</li><li>• Optimized writes to DynamoDB from a mix of services across 2 teams to save ~\$100K/year.</li><li>• Worked across teams to expand existing Postgres databases to support features like fine tuned data access control and flexible pricing across Amplitude product suite.</li></ul>  |                               |                              |
| <b>Senior Software Engineer</b>  | <b>Flexe</b>                  | <b>June 2021 – June 2022</b> |
| <ul style="list-style-type: none"><li>• Led customer integrations for all customers ranging from non-technical SMBs to Nike.</li><li>• Led 2 engineers to build internal solution for handling customer integrations for proprietary Walmart protocol (AS2).</li><li>• Merged 4 different code bases into 1 to reduce customer integration time by weeks and reduce size of codebase by 90%.</li></ul>   |                               |                              |
| <b>Software Development Engineer</b>   | <b>AWS DynamoDB – Logs</b>    | <b>Oct 2018 – June 2021</b>  |
| <ul style="list-style-type: none"><li>• Tech-lead for DynamoDB's core data archival and log replication service, managing 2 Exabytes of data backups while maintaining high availability and durability for DynamoDB (~90 million requests per second during peak hours).</li><li>• Created long-term plan and strategy to build first of its kind database with S3 as a storage engine.</li><li>• Led design and implementation with a team of 6 to double DynamoDB's availability and durability at a 10<sup>th</sup> of the cost.</li><li>• Proposed and led design and implementation for a fully distributed control plane to manage ~1.5K bare metal ec2 instances using gossip and distributed executors.</li><li>• Designed and implemented new token counting system for DynamoDB On-Demand feature.</li><li>• Built data corruption detection tool to quickly parse through exabytes of data to confirm bug in Samsung hard disks.</li></ul> |                               |                              |
| <b>Software Development Engineer</b>   | <b>AWS DynamoDB - Streams</b> | <b>July 2016 – Oct 2018</b>  |
| <ul style="list-style-type: none"><li>• Mentored and guided 2 engineers to build new asynchronous service to handle GDPR data deletion.</li><li>• Mentored and guided an engineer in Seattle and 2 engineers in Virginia to expand Data Backups feature for Gov Cloud.</li><li>• Led design and implementation for encryption of data backups. Worked alongside principal security engineer and General Manager of DynamoDB to balance security with quick delivery for Samsung and NSA.</li><li>• Led end-to-end design, implementation, and rollout of the space-saving feature creating savings of \$500K/month.</li><li>• Automated tedious testing tasks, reducing testing time from 1 month to 1 week.</li></ul>   |                               |                              |

## INTERSHIPS/TEACHING

- **Akuna Capital (SDE Intern: May 2014 – Aug 2014):** Built a low latency CME simulator in C++ to test trading algos.
- **Teaching Assistant (ECE 391 - Operating Systems: Aug 2015 – May 2016):** Graded exams and held office hours for operating systems course as part of which students are expected to produce a working OS from scratch.

## SKILLS

- Java, Python, C++, Go Lang, Rust (Basic); AWS, GCP; Terraform, Kubernetes
- Distributed Systems, Paxos, Consensus Algorithms, Database Architecture, Gossip Protocol

## PROJECTS/PUBLICATIONS

- **[Archie \(Co-Creator: 06/23 – Present\):](#)** LLM interpreter that automates runbook execution for AWS.
- **[Bluetooth Low Energy in Dense IoT Environments \(Research Assistant: 2016\):](#)** Built prototype to demo how BLE can be deployed in large scale noisy environments.
- **[Smart LaBLEs \(Research Assistant: 2016\):](#)** Built prototype to demo how BLE can be used to track inventory.
- **[Amazon DynamoDB \(2022\):](#)** Worked with Mo Erben (author) to lead design and implementation for log only replicas.

## EDUCATION

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|--|---|
| <b>University of Illinois at Urbana Champaign</b><br><i>B.S. Computer Engineering with Honors</i>  | <b>Aug 2012 – May 2016</b><br><i>GPA: 3.60/4.00</i> |
| <ul style="list-style-type: none"><li>• Honors: Dean's List (Fall 2012): Top 20% of class, James Scholar (2013 – 2014), HKN Member</li></ul> |   |