

# Oscar Cwajbaum

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## Overview

Software development leader with a strong technical and operational background, with experience managing external partners. Experience managing Big Data, web services, mobile applications, and embedded development.

## Amazon

06/2011 - Present

### Software Development Manager (Lab126 Computer Vision)

- Led 20 person geographically-distributed org responsible for collecting, managing, and annotating very large datasets used to train Computer Vision (CV) Machine Learning (ML) models.
- Gathered, ingested, and annotated a diverse set of image and video data to support multiple, parallel Computer Vision projects. State-of-the-art machine learning algorithms are extremely data hungry; the large quantity of representative, accurately tagged collected data was key to the success of these projects.
- Grew the team from 2 engineers and 3 ops to 9 engineers and 11 ops. Also oversaw the growth and operation of two other tagging/annotation teams within Amazon. Org included a Software team to develop the infrastructure to manage large data sets and the tagging/annotation tools required by the Ops team, as well as the Ops team itself.
- Developed cross-project tools and platform for ingesting, managing, and tagging Big Data sets consisting of millions of images and thousands of hours of video, using AWS Lambda, EC2, S3, RDS, and SQS. Reduced development and operational costs by eliminating the need for one-off data management solutions and simplifying cross-project data reuse.
- Increased data collection and annotation rate by 100x in 6 months by improving operational efficiency and tooling.

### Software Development Manager (Amazon Web Services EC2)

- Led team of 6 engineers responsible for all Amazon Machine Image (AMI) APIs and management services, including ImageManager and AMI Copy.
- Deployed the new Image Manager Service to all AWS regions, and switched over all production traffic to it without any customer impact or maintenance downtime.
- Led the design and development of AWS's next-generation AMI feature set.
- Worked closely with many other AWS services and service teams, including S3, EBS, IAM, and DynamoDB.

### Software Development Manager (Lab126 Kindle Platform)

- Brought up first silicon validation and development board for the 2015 4K FireTV.

- Onboarded a major SOC vendor on the software side, established co-development processes, and built the cross-org software engineering team relationship.
- Worked closely with internal and partner hardware teams to design and implement software for multiple next-generation devices that will expand Amazon into major new product categories.

## Software Development Manager (Lab126 Kindle Tools)

- Architected, built, and deployed development web services used by over ten thousand engineers and staff worldwide, including build artifact management, code signing, software update publishing, and open-source compliance.
- Architected and deployed a Kindle-wide process for pushing frequent application over-the-air (OTA) updates to tens of millions of customer devices while maintaining a high quality bar.
- Drove the use of over-the-air (OTA) OS updates into the standard internal QA workflow, allowing QA to test builds significantly faster at a lower cost per build.
- Increased the team's use of Amazon Web Services (AWS) to streamline operations and reduce costs, including EC2, S3, Opsworks, CodeDeploy, ELB, RDS, and VPC.
- Transitioned the Amazon code signing service from another team. Scaled the service to handle 100x the number of requests without adding new servers, reducing operational costs.
- Developed, socialized, launched, and ran the all-Kindle technical orientation for new Lab 126 hires.

## Sr. Software Development Engineer (Lab126 Kindle)

- Architected and led the development of the Kindle-wide build artifact management system that leveraged Amazon Web Services (AWS) S3 and EC2.
- Designed and deployed a development process that reduced by 66% the time required to develop and ship a Kindle e-reader software release.
- Made major contributions to the architecture and implementation of a new Kindle over-the-air (OTA) update service that allowed Kindle to increase the pace of updates by 10x. This service and architecture is now used by tens of millions of devices worldwide.

## TiVo

08/2007 - 06/2011

### Software Engineering Lead

- Led the project to move testing from physical servers to VMware to speed up testing and reduce infrastructure costs.
- Led the 64-bit porting project from RHEL4-i386 to RHEL5-x64.
- Refactored and documented the server install and configuration procedure, reducing the time to set up a new end-to-end Service instance from 2 months to 8 days.
- Owned all operational features that were required to scale the software to multiple cable providers and multiple remote sites, and to ensure the software could meet contractual SLAs.
- Ensured that issues raised by IT/Operations and QA were addressed by Engineering.
- Engineering point of contact for all outages and incidents that couldn't be resolved by IT.
- Architect and team lead for the automated end to end testing framework.

## Trovix

04/2007 - 08/2007

## Operations Engineering Lead

- Planned and executed data center migration to new hosting provider with zero unplanned downtime to customers, greatly reducing operational costs.

## Palm (Handspring / PalmOne)

03/2003 - 04/2007

### Lead Software Engineer

- As the PalmOS mobile web browser developer (Blazer 3.0) and mobile web browser lead (Blazer 4.0), managed all aspects of browser development, including writing technical specifications, implementing features, overseeing technology vendors, roadmap planning, coordinating with QA, and mentoring other engineers.
- Delivered the Blazer 4.0 mobile web browser in-budget, feature-complete, and meeting all stability requirements, and in time for inclusion in all Q3/Q4 2004 products.
- Helped design a revised UI for Blazer 4.0 to address user feedback on the previous version, and then fully implemented the new design, reducing customer support calls.
- Managed the technical relationship with Palm's web technology vendor, and provided assistance to the business development team as needed.
- Ported the Blazer web browser to the Palm Folio netbook.

## Education

Bachelor of Science in Computer Science from the University of Illinois Champaign/Urbana