Open Source at Amazon

Alolita Sharma
Principal Technologist, Amazon Web Services
Twitter: @alolita

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Open Source @ Amazon

Agenda

- What are we doing

- How can you get involved

- How can you benefit

What are we doing?

What are we doing?

We're doing quite a few things...

- Our Motivations

- Participating in Open Source Projects

- Making It Easier for Amazonians to Participate

- Growing Open Source Communities

Why do we do Open Source?

Motivations

- We are motivated to collaborate by many of our partners and customers
- Open source projects helps us to innovate
- Scaling AWS services around open source helps us meet customer demand
- Seeding the market with open data helps us meet customer demand

What are we doing?

Participating in Open Source Projects

- Amazon participates in hundreds of open source projects

- Diverse portfolio of languages from Java to JavaScript, PHP to Python

- 3rd party and foundation projects like Spinnaker, TensorFlow

Check out our Open Source Projects

aws.github.io

aws

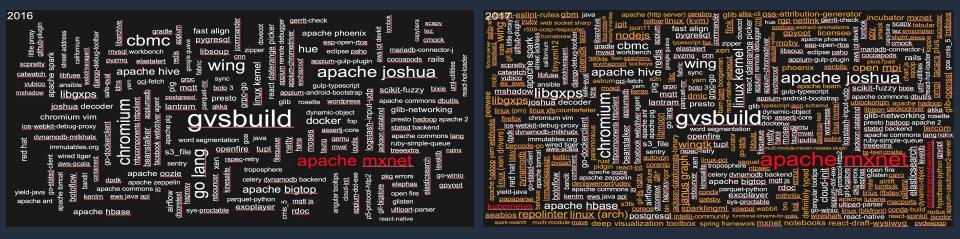Search Amazon Projects [   ] Submit

Open Source at AWS

Code of Conduct FAQ

Featured Projects

Amazon FreeRTOS — C	Apache MXNet — C++	AWS Amplify — JavaScript	Blox — Java
Amazon FreeRTOS is an OS for microcontrollers that makes small, low-power edge devices easy to program, deploy, secure, connect, and manage.	A deep learning framework designed for both efficiency and flexibility. Allows you to mix symbolic and imperative programming.	AWS Amplify is a JavaScript library for front-end and mobile developers building cloud-enabled applications.	Build schedulers and integrate third-party schedulers on top of ECS, while leveraging Amazon ECS to fully manage and scale your clusters.
S2N — C	**Boto** — Python	**Sockeye** — Python	**AWS CLI** — Python
A C99 implementation of the TLS/SSL protocols that is designed to be simple, small, fast, and with security as a priority.	Allows Python developers to write software that makes use of services like Amazon S3 and Amazon EC2.	A sequence-to-sequence framework with a focus on Neural Machine Translation based on Apache MXNet.	Universal Command Line Interface for Amazon Web Services.
Chalice — Python	**AWS SDK for Go** — Go	**AWS SDK for JavaScript** — Javascript	**Git Secrets** — Shell
Python serverless microframework for AWS that allows you to quickly create and deploy applications that use Amazon API Gateway and AWS Lambda.	AWS SDK for the Go programming language.	The official AWS SDK for JavaScript, available for browsers and mobile devices, or Node.js backends	Prevents you from committing passwords and other sensitive information to a git repository.

Amazon Contribution Volume Is Growing Every Year

What are we doing?

Making it **Easier** for Amazonians **to Participate**

- Automating contribution tools for software development
  - Repos rollout
  - Licenses, CoCs
  - Other Processes and Tools
- Incentivizing Teams to Participate
  - Recognition
  - Building confidence to contribute through mentorship
  - Participating in open source events

What are we doing?

Growing Open Source Communities

We are…
- Sponsoring
    - Projects like Apache MXNet, PyPi, FreeRTOS projects
    - Events like FOSS Backstage, FOSDEM, PyCON, OSCON
- Members of
    - Foundations like ASF, PSF, OSI, LF, CNCF, CNI
- Spreading the word
    - Presenting our open source activities at conferences
    - Publishing on opensource.amazon.com, AWS open source blog, etc.

How can you get involved?

How do you get involved?

- Work with us
  - On a 3rd party project
    - Apache MXNet, ONNX, PyPi
    - Coffee Haus model
  - Contribute to an AWS project
    - AWS Amplify, Chalice
    - Company Cafeteria model
- What can you contribute
  - Code
  - Artifacts e.g., Alexa Skills, ML Models, Serverless Application Models
  - Submit bugs, report issues
  - Improve technical docs

Example Open Source Project: Gluon

github.com/gluon-api/gluon-api

What is it

Gluon is a new library for machine learning

Who's contributing

AWS teams, Microsoft developers, Apache MXNet

Why it matters

Gluon provides a concise API for defining machine learning models using a collection of pre-built, optimized neural network components

Who benefits

ML developers, data scientists

Model

Hybrid of Company Cafeteria and Coffee Haus

Example Open Source Project:
AWS Amplify

aws.github.io/aws-amplify

What is it

JavaScript library for web and mobile apps using cloud services

Who's contributing

AWS teams, app developers using AWS & other cloud services

Why it matters

AWS Amplify provides a declarative and easy-to-use API for cloud operations such as user authentication, audit, secure API access

Who benefits

Developers building mobile and PWA apps using client libraries like React, Ionic, Vue

Example Open Source Project:
Chalice

github.com/aws/chalice

What is it

Chalice is a Python serverless microframework for AWS cloud services

Who's contributing

AWS SDK teams, app developers using AWS cloud services

Why it matters

Chalice provides a easy-to-use, decorator-based API to write Python apps using AWS serverless Lambda functions, AWS cloud service APIs

Who benefits

Developers building & deploying Lambda apps

How can you benefit?

How can you **benefit**?

We can
- Showcase your work
  - Write about your open source project
  - Present your project at an Amazon tech conference like re:Invent or AWS Summit
- Support your project
  - Get AWS Credits for your open source project
  - Contribute resources to projects with common goals
- Be part of a larger technical community

Learn more...

Amazon Open Source Project Resources

- Web
  - opensource.amazon.com
- Blog
  - aws.amazon.com/blogs/opensource
- GitHub
  - aws.github.io
- Gitter
  - gitter.im/aws
- Reddit
  - www.reddit.com/r/aws
- Twitter
  - twitter.com/awsopen
- Open Guide
  - github.com/open-guides/og-aws
- AWS Technical Documentation
  - github.com/awsdocs

Open Source @ Amazon

Thanks!

Questions?
Ping me @alolita
Follow us @awsopen

We've talked about

- What Amazon is doing in open source...

- How can you get involved with our open source projects...

- How you can benefit ...