

I'm an experienced (10+ years) engineering manager, systems architect, technical lead and software engineer. I specialize in greenfield development, innovation, microservice architectures and online video distribution systems. I believe engineering is a discipline driven by making decisions based on data. *Seeking director and management level roles. References available upon request.*

## Patents

USPTO 10,440,367 - Systems and methods for adaptively encoding video stream  
USPTO 10,419,786 - Systems and methods for securely generating live previews  
USPTO 2020099974 - Systems And Methods For Generating Individualized Playlists - PENDING  
USPTO TK - Fast Video Stream Startup - PENDING

## Technologies

*Languages:* Go, Java, C, LUA, JS, Bash, Python, Lisp, OCaml

*AWS:* EC2, Lambda, S3, Glacier, SQS, SMS, SNS, RDS, ElastiCache, VPC, CloudFront, Route 53, CloudWatch, CloudFormation, CloudTrail, MediaTailor, Athena, EMR, Glue, IAM, KMS, ECR, EKS, ECS

*GCP:* Compute Engine, Cloud Storage, GKE, BigQuery, Cloud Load Balancing, Cloud Monitoring, Pub/Sub, IAM, Container Registry, G Suite

*Databases:* MySQL, Postgres, MongoDB, Redis, Cassandra, Sleepycat/Xmldb, Jena

*Queuing:* Kafka, NATS, RabbitMQ, ActiveMQ

*Management:* Hybrik, Concourse, Vault, Zookeeper, Chronos

*Data:* Hadoop, Spark

*Software:* IDEA Suite, JIRA, Confluence, PivotalTracker, Emacs, Vim, Gnuradio, Matego/Paterva, L<sup>A</sup>T<sub>E</sub>X

*GNU/Linux:* Arch, Debian, Ubuntu, LFS

## Roles

April 2019 - Present **Pluto TV** New York, NY

**Engineering Manager Video Systems**

I manage 3 engineering teams of 4-6 people each and report directly to the VP of Engineering. My teams are responsible for all transcoding, video streaming, and ad insertion operations.

- Design and PoC of next-generation CMAF video ingestion workflow and JIT packaging workflow. Designed DRM, 4K, and multi-ABR ladder solutions.
- Designed and launched new way to serve VOD assets with HLS. The company sought a patent on this work.
- Introduced StatsD and SignalFX to monitor all video services 24/7. Setup monitoring and alerting with Pager-Duty.
- Refactored approach to error handling and logging to uncover dozens of long existing unknown defects.
- Oversee the management of over 700 EC2 instances running more than 3.5K containers.
- Transitioned the entire video stack to ephemeral, immutable infrastructure with Terraform.
- Introduced the concept of service timeouts, backoff and operational degraded state, to prevent cascade failures.
- Rebuilt CI/CD workflows to enable automated deployments.
- Built out all 3 teams starting with only 1 employee.
- Hold regular one-on-ones with all team members, review PRs and set coding standards.
- Plan roadmap initiatives, sprints, and epics. Work with product leads from other teams.
- Facilitate all regular agile meetings: scrum, planning, grooming, and retrospective.

September 2018 - April 2019 **Integral Ad Science** New York, NY

**Team Lead & Manager OTT Measurement**

I managed a team of 6 engineers reporting to a Director of Engineering. My team was responsible for designing, building, and launching IAS's OTT ad-verification and measurement solution.

- Successfully applied agile principles to bring an out of control project on track to meet a hard customer deadline.
- Worked with the data science team to create a new fraud detection algorithm appropriate for server side ad beaconing.
- Was the principal architect for migrating all the team's services from on-prem infrastructure to AWS.
- Hold regular 1-1s with all team members, and worked with a scrum master to facilitate all agile ritual meetings.
- Worked with a product manager to plan epics and roadmap initiatives according to SAFe.



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## Matt Tretin

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New York NY, 10028

2008 - 2010 UVM Complex Systems Center Burlington, VT

Student Researcher

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### Certificates

2011 JavaSpecialists.eu Java Specialist Master  
2011 JavaSpecialists.eu Java Concurrency Specialist

### Education:

2006 - 2010 University of Vermont Computer Science & Philosophy  
2000 - 2004 Weston High School  
2002 HCSSiM  
2003 HCSSiM