Matthew Schuchhardt, Ph.D.

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EXPERIENCE

Mediaocean   July 2020 – Present
VP of Engineering

- **Scope 2.0 Platform Launch:** Spearheaded the successful launch of the Scope 2.0 ad management platform, enhancing features and performance to meet evolving market demands.
- **Remote Team Build-out:** Expanded a geographically co-located team into a 65-member remote team spanning five continents, significantly increasing diversity and the talent pool.
- **Transition to Remote Organization:** Implemented asynchronous communication strategies to successfully transition the engineering organization from in-office to remote work, boosting productivity and collaboration.
- **SSO Migration:** Led the team in upgrading the platform from a simple password-based authentication system to a unified JWT-based SSO solution, enhancing security and compatibility across Mediaocean's business units.
- **Data Center Consolidation to AWS:** Directed the migration of two co-located data centers to AWS, achieving improved compliance, reduced complexity, and a substantial decrease in operational costs.
- **Infrastructure Team Integration:** Orchestrated the integration of Scope and Flashtalking infrastructure teams as part of a business unit reorganization. Directly managed Flashtalking's infrastructure team to optimize efficiency and collaboration.

4C Insights   Sept. 2019 – July 2020
Director of Engineering

- **DevOps Transformation:** Founded the DevOps infrastructure team, leading the transition from manual sysadmin approach to an automated Kubernetes infrastructure. Introduced a modern DevOps stack with infrastructure-as-code and immutable architecture, reducing deployment times by 90% and increasing build reliability.
- **High-Performance Ad Server:** Developed and deployed an OTT ad server matching system capable of handling over 2,000 impressions per second.
- **Microservice Migration:** Laid the groundwork for transitioning from a monolithic architecture to microservices, enhancing data ownership and separation.
- **Service Interface and Tooling:** Streamlined CI/CD processes by implementing a common service interface and CLI tooling, reducing complexity in local development and deployment errors.

4C Insights   Aug. 2015 – Sept. 2019
Senior Engineer

- **Developed New Advertising Publishers:** Created and maintained two new advertising publishers within the ad activation platform, expanding market reach.
- **Ad Automation Product Expansion:** Led the expansion of the ad activation automation product, resulting in a 40% increase in automated ad placements.
- **Display Activation Product:** Led the development of a display and search feature in collaboration with a new industry partner.
- **Standardized Engineering Practices:** Developed strategies to standardize the organization's engineering principles and practices, fostering a culture of consistency and quality.

Intel Corp.   June 2013 – Oct. 2013
Graduate Research Intern   June 2014 – Dec. 2014

- **Adaptive Display Brightness Subsystem:** Developed and published a paper on an online learning system for Android smartphones, enhancing adaptive brightness model accuracy by integrating user input and contextual data. Utilized a modified machine learning library and custom code to continuously improve model accuracy, optimizing through feature selection techniques and domain-specific analysis.
- **Performance Optimization and Analysis:** Developed a system to automatically identify sources of graphical frame rate issues using system-level trace data. Conducted comprehensive OS and graphical subsystem analysis over time through domain-specific data analysis, significantly enhancing overall system performance.

EDUCATION

Northwestern University   Aug. 2009 – Aug. 2015
Ph.D., Computer Engineering
Advisor: Prof. Gokhan Memik

Valparaiso University   Aug. 2005 – July 2009
Bachelor of Science, Computer Engineering

PUBLICATIONS

M. Schuchhardt. User-aware System Design and Optimization (Doctoral dissertation, Northwestern University), 2015.

M. Schuchhardt, S. Jha, R. Ayoub, M. Kishinevsky, G. Memik. **"Optimizing the Relationship Between Mobile Screen Power Consumption and User Satisfaction"**. Proceedings of the International Conference on Compilers, Architecture and Synthesis for Embedded Systems (CASES), 2015.

M. Schuchhardt, S. Jha, R. Ayoub, M. Kishinevsky, G. Memik. **"CAPED: Context-aware Personalized Display Brightness for Mobile Devices"**. Proceedings of the International Conference on Compilers, Architecture and Synthesis for Embedded Systems (CASES), 2014.

M. Schuchhardt, A. Das, N. Hardavellas, G. Memik. **"The Impact of Dynamic Directories on Multicore Interconnects"**. IEEE Computer, vol.46, no.10, pp.32–39, October 2013.

M. Schuchhardt, B. Scholbrock, U. Pamuksuz, G. Memik, P. Dinda, R. P. Dick. **"Understanding the impact of laptop power saving options on user satisfaction using physiological sensors"**. Proceedings of the International Symposium on Low Power Electronics and Design (ISLPED), 2012.

TECHNICAL SKILLS

Languages: Python, Javascript, Typescript, Bash, Java, C/C++, GraphQL
Databases: MariaDB, MongoDB, PostgreSQL, Elasticsearch, Redis, RabbitMQ
Frameworks: Flask, Pydantic, FastAPI, Celery, React, Vue.js
DevOps: Kubernetes, Helm, Terraform, GitHub Actions, Ansible, Jenkins, ECS
Cloud Environments: AWS
Compliance: SOC-2, GDPR
Machine Learning: Weka, scikit-learn, PyTorch
Tools: GitHub, VSCode, Copilot