## Summary

I'm a practiced architect, enthusiastic learner, and intuitive technical communicator with 12 years of professional programming experience in a broad variety of demanding environments. In my next role, I'm looking to deliver tailored infrastructure and tooling solutions to developers, researchers, and creatives.

#### Skills + Languages

# Full-Stack Web Development, Cloud Architecture, Identity Management, Tooling, UX, Functional Design, Product Management

TypeScript/JavaScript, Clojure/ClojureScript, Terraform, Java, Kotlin, Rust, C, Erlang, Haskell, Lua, C#/F#, Git, HTML/CSS, Web Components, React, SQL, NoSQL, GraphQL, Datalog, FRP, SAC, ECS, AWS, Azure, GCP, JIRA, Agile, Scrum, Kanban, GTD, PKM, Zettlekasten

### Experience

## Co-founder, Lead Architect, Design Lead — NuID, Inc.

2017-2022

- + Designed and implemented an elastic, highly available authentication API and web-based developer portal using Clojure, Java, Typescript, React, Terraform, and AWS (Lambda, SQS, SNS, S3, EC2, Dynamo).
- + Led small, distributed teams across product development, engineering, and design, which were responsible for onboarding thousands of users to our zero-knowledge authentication service and public key infrastructure.
- + Increased the productivity of our developer organization by adhering to web standards and frameworks, cost-optimized cloud-native architecture, Agile methodologies, CI/CD, live previews, Git, and infrastructure-as-code.
- + Collaborated with professor of cryptography and ACM Fellow Jonathan Katz to develop a zero-knowledge authentication protocol for which we were granted patents US 10880089, 11496310.

#### Data Scientist - Microsoft

2015-2017

- + Led development and analysis of a machine learning model for device age, informing high-level Windows 10 marketing and delivery strategies across the Windows organization.
- + Wrote and maintained data pipelines in Apache Spark and Hadoop-like architectures powering insights dashboards relied upon by our senior leadership and the CTO of the Windows and Devices Group.
- + Designed and implemented a compiler and toolchain in C#/F# to improve metric accuracy, reliability, and compute efficiency.

# Software Engineer — Rustici Software

2013-2015

- + Contributed to open-source eLearning libraries and browser extensions to increase adoption of an emerging specification and establish new revenue streams for our team.
- + Designed and implemented an open-source conformance suite for testing new and existing library implementations, leading to an ecosystem-wide improvement in compatibility and improving the visibility of our products.

# Education

## M.S. Computer Science — Vanderbilt University

2013-2015

- + Thesis: Design Patterns in Concurrent and Asynchronous Systems
- + Project: Distributed Online Record Linkage

# B.S. Computer Science — Vanderbilt University

2011-2015

- + GPA: Cumulative 3.777/4.0 Major 3.854/4.0 M.S. 4.0/4.0
- + Completed B.S. and M.S. in 4 years
- + Fine art minor focusing in drawing and printmaking

## References

# J.D. Hollis — jd@theconsultingcto.com

+ Collaborator on infrastructure at NuID

#### Pallavi Baral — pabaral@microsoft.com

+ Manager and team lead at Microsoft

## Interests

Hiking, Printmaking, Programming Languages, Game Design, Mereology, Music