SAM PAL

in/sam-pal/ ● github.com/spal1 ● (408) 571-9698 ● sspal2@illinois.edu

EDUCATION

University of Illinois at Urbana-Champaign — **Urbana, IL**
- Bachelor of Science in Computer Science — *May 2021*
- Hoeft Technology and Management Minor

SKILLS

Technical: C++, C, Python, Java, Node.js, MongoDB, SQL, Haskell, Kubernetes, Kafka, Confluent Cloud
Relevant Coursework: Security, Programming Languages & Compilers, Algorithms, Databases, Systems Programming, Applied Machine Learning, Text Information Systems, Data Structures, Computer Architecture, Discrete Structures, Software Design Studio, *Planned: Distributed Systems, Numerical Methods*

EXPERIENCE

Confluent — **Virtual**
Software Engineering Intern — Cloud-Native Kafka — *May 2020 – Aug 2020*
- Added relevant JMX metrics for Agents and Tasks in KIP-627 to Trogdor, Apache Kafka's testing framework
- Introduced chaos engineering through network fault injection to Confluent Cloud by extending Trogdor's fault injection capabilities with a new CloudNetworkFault and integrated this with Confluent's automated cloud testing

MongoDB — **New York City, NY**
Software Engineering Intern — Node.js Driver — *May 2019 – Aug 2019*
- Developed various user-requested changes to error handling and testing of the Node.js Driver
- Designed and implemented a new testing framework using Mocha.js for the entire Node.js Driver, focusing on its design, introducing better functionality, minimizing startup and teardown costs of running tests, and general performance

The New York Times — **New York City, NY**
Technology Intern — Digital Subscriptions Backend — *May 2018 – Aug 2018*
- Utilized GCP to reduce digital subscriptions testing costs to ~$0.01 using Cloud Functions
- Integrated the entire international subscription payment process with Worldpay
- Used Cloud Dataflow to optimize a daily digital subscription Cron job previously run on GAE

Secure Federated Learning — *Undergraduate Research Assistant* — *July 2020 – Present*
- Research: Secure Federated Learning for Clinical Informatics with Applications to the COVID-19 Pandemic under Professors Sanmi Koyejo and Dakshita Khurana, funded by C3.ai Digital Transformation Institute
- Building a machine learning model using distributed training that aggregates the local models of various hospitals to improve a global model ultimately aimed at gaining secure learning insights from COVID-19 patient X-ray data

Course Assistant
CS 241: Systems Programming — *Aug 2019 – Present*
CS 225: Data Structures — *Jan 2019 – May 2020*

LEADERSHIP & AWARDS

ACM Reflections | Projections — *Director* — *Dec 2019 – Present*
Illinois Women in Computer Science — *Head of Corporate* — *May 2018 – May 2019*
Bluebonnet Data Fellow — *Rachel Willis Kansas Senate District 20 Campaign Data Team* — *June 2020 – Present*
Rewriting the Code Fellow — *Dec 2017 – Present*

Extracurricular Involvement: HackIllinois (Staff), CS@ILLINOIS Sail (Staff), Students Consulting for Nonprofits, The Daily Illini (Web Developer), Society of Women Engineers