Nicholas Tillmann

ntillmann1439@gmail.com   **Portfolio | Github | Linkedin**

SKILLS

- **Languages:** Python, Go, Javascript, Typescript, Java, MySQL, PostgreSQL, C
- **Frameworks:** Next.js, React.js, Node.js, Express.js, Angular.js, Flask, Cypress, TailwindCSS,
- **Tools:** Git, Docker, Kubernetes, Kafka, Skupper, Prometheus, Thanos, Grafana, Instana, LogDNA, Redis, Neo4J
- **Cloud Services:** EC2, S3, Lambda, SageMaker, Firebase, Compute Engine, Cloud Run, BigQuery, PromQL, OpenShift K8
- **Certifications:** IBM Enterprise Design Thinking Practitioner | IBM Blockchain Essentials | IBM Developer Jumpstart

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WORK EXPERIENCE

IBM   *Aug 2023 - Current*
Software Engineer   Research Triangle Park, NC
Hybrid Cloud Mesh Team
- Develop and maintain **observability** microservices for IBM's Hybrid Cloud Mesh, enhancing **APM/NPM** capabilities for multi-cloud environments using **Skupper** for layer-7 service interconnect.
- Manage flow log pipelines of time series data to provide insights into network traffic and performance of applications and services across various hybrid cloud providers, both in the cloud and on-premises.
- Configure and manage **Prometheus** agents for remote writing metrics to **middleware**, establishing the logic flow from metric scraping to long-term storage in Thanos, with **Grafana** used for visualizing these queries.
- Increased code coverage of observability microservices to 80% and wrote end-to-end tests for durability and integration testing, ensuring robust and reliable performance before general availability (GA) release.

IBM   *May 2022 - Sep 2022*
Software Engineer Intern   Remote
Cloud Expert Labs Team
- Developed branded login pages from scratch using **Typescript**, **Next**.js, **Express**.js, **Node**.js, and **Passport**.js; seamlessly integrated with IBM Cloud services while also adhering to strict design guidelines provided by IBM Carbon Design
- Implemented secure **REST API** with **Express** and **IBM Cloud**, handling user authentication, login, password reset, email notifications, and multi-factor authentication in addition to an IBM-branded user interface
- Streamlined retailer onboarding and data management tasks by **60%** through Python scripts
- Improved product reliability by integrating comprehensive **Cypress E2E** tests into the **CI/CD** pipeline

Leidos   *June 2021 - Dec 2021*
Software Engineer Intern   Reston, VA
Annex Intelligence Division
- Collaborated with the **Annex Intelligence** team on the design, development, and deployment of web and mobile applications for the **US NCTC**, contributing to the successful implementation of counter-terrorism initiatives
- Played a key role in developing features and functionalities for web portals primarily using **Vue**.js, **Node**.js, **Elastic Search,** and **S3** services resulting in an improved user experience and more efficient data processing
- Demonstrated proficiency in working with a diverse set of tools including but not limited to **JIRA**, **Docker**, **GitLab**, **SonarQube**, **Git**, **Postman**, **MySQL**, **Tomcat**, **AWS**, and **Linux** (Ubuntu)

RECENT PROJECTS

YTRecap Github   *March 2023*
YTRecap.org is a web app built using Python Flask that can summarize any YouTube video by parsing the video for its closed captions and passing them to an NLP large language model
GradeMyAid Github   *December 2022*
GradeMyAid.com is a financial aid tool built using Next.js and the CollegeScorecardAPI that offers the ability to compare financial aid packages from varying universities to understand which FAFSA offers are the most appealing

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EDUCATION

University of Pittsburgh   *May 2023*
Bachelor of Computer Science   *Pittsburgh, PA*
Coursework: Algorithmic Implementation, Data Structures, Discrete Structures, Assembly Language, Intermediate Programming, Computer Organization, Software Engineering**,** Web-Development, Artificial Intelligence, Systems Software, Formal Methods in Computing, Operating System, Database Management Systems, Quality Assurance, Big Ideas in Computing
Honors: Cum Laude