

JOHN PRATT

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EDUCATION & CERTIFICATIONS (validation links included)

Georgia Institute of Technology, Atlanta, GA

Bachelor of Science - Computer Science (concentrations: Artificial Intelligence, People)

Amazon Web Services

2021-2024

[Solutions Architect Professional](#), [DevOps Engineer Professional](#), [Solutions Architect Associate](#), [Developer Associate](#), [SysOps Administrator Associate](#), [Data Engineer Associate](#), [Machine Learning Engineer Associate](#), [Security Specialty](#), [Advanced Networking Specialty](#), [Machine Learning Specialty](#), [AI Practitioner](#), [Cloud Practitioner](#)

Google Cloud

2023-2024

[Professional Cloud Developer](#), [Professional Cloud DevOps Engineer](#), [Professional Cloud Architect](#), [Professional Cloud Network Engineer](#), [Professional Cloud Security Engineer](#), [Professional Cloud Database Engineer](#), [Professional Data Engineer](#), [Professional Machine Learning Engineer](#), [Associate Cloud Engineer](#), [Associate Workspace Admin](#), [Cloud Digital Leader](#), [Intro to LLMs](#), [Intro to Responsible AI](#), [Intro to Generative AI](#)

HashiCorp

2022-2024

[Terraform Associate \(002\)](#), [Vault Associate \(002\)](#), [Consul Associate \(003\)](#)

Microsoft Azure

2024

[Solutions Architect Expert](#), [DevOps Engineer Expert](#), [Cybersecurity Architect Expert](#), [Developer Associate](#), [Administrator Associate](#), [Security Engineer Associate](#), [Network Engineer Associate](#), [AI Engineer Associate](#), [Data Engineer Associate](#), [Database Administrator Associate](#), [Azure Fundamentals](#)

Snowflake

2024

[SnowPro Architect](#), [SnowPro Data Engineer](#), [SnowPro Data Scientist](#), [SnowPro Data Analyst](#), [SnowPro Administrator](#), [SnowPro Core](#)

The Linux Foundation

2024

[OpenJS Node.js Services Developer](#), [OpenJS Node.js Application Developer](#), [Certified Kubernetes Administrator](#), [Kubernetes and Cloud Native Associate](#)

Databricks

2024

Generative AI ([Associate](#), [Fundamentals](#)), Machine Learning Engineer ([Professional](#), [Associate](#)), Data Engineer ([Professional](#), [Associate](#)), [Apache Spark 3.0 Associate Developer \(Python\)](#), [AWS Platform Architect](#), [Azure Platform Architect](#), [GCP Platform Architect](#), [Databricks Fundamentals](#), [Data Analyst Associate](#)

(Other organizations)

2020-2024

[Docker Certified Associate](#) (Docker, Inc.); [Certified Professional Python Programmer](#) (PCPP - Python Institute); Certified Secure Software Engineer (Secure Code Warrior); [Certified Cisco Network Associate](#), [Certified DevNet Associate](#) (Cisco); [Liquibase Certified Practitioner](#); [Progress Chef Associate](#) (Progress Software)

EXPERIENCE

Pratt Solutions, Remote (Vienna, VA)

May 2020 - Present

Founder/CEO, Lead Software/DevOps Engineer, Coach

- Taking on IT/software engineering consulting & career/life coaching projects as my schedule allows; looking to wind down operations & take on my next full-time/long-term contract role.
- Enhanced security of client's ~\$20 trillion in managed assets (~30k customers) via reusable Java Spring Boot library to handle Okta Authentication & Authorization for REST APIs, including JWT decoding & validation via Azure Entra, & token signing with key pulled from Azure KeyVault.
- Enhanced client's DevOps procedures, security, & infrastructure stability via custom Azure Cosmos DB Terraform module, including custom authentication flow with user assigned identities.
- Saved client ~\$35,000/mo in Azure costs with cleanup of resources dedicated to existing CosmoDB accounts including lock-down of custom Terraform module to require elevated approval to spin up costly resources.

- Led decision-making process in client's transition from OracleDB to Azure PostgreSQL DB, including creating decision matrix comparing this final solution to Azure SQL Managed Instance & Azure SQL
- Sped up incident response times by ~20% by creating custom Google Cloud alerts
- Enhanced management of the client's **1 million vehicles** by developing Python REST API with endpoints for dynamic Snowflake queries, deployed to AWS.
- Improved security, standardization, efficiency of SDE by writing DevOps & SecOps Best Practices guides for team of **20+ engineers**.
- **Sped up remote Virtual Desktop login flows of 20+ engineers by ~93%** via python Selenium browser automation script & macOS "Hammerspoon" hotkey automation so developers can securely enter their usernames/passwords one time at login & simply press a key on their keyboard to "copy & paste" it into whatever field they're typing in.
- **Shortened document upload times by 91%** via python browser automation script to scrape LinkedIn profile & automatically upload it to company professional certification system.
- Enhancing php backend cert system to periodically sync new professional certifications with client cert system via integration with Credly & Accredible APIs.
- Consolidated/enhanced client's Terraform modules used for spinning up Azure resources including subnets, VNETS, KeyVault, Cosmos DB & more
- Upgraded client's AzureRM custom Terraform modules to AzureRM 4.0 & added multi-region capabilities for Cosmos DB & KeyVault.
- Created custom PowerShell scripts to automate menial Client tasks like email/calendar invite forwarding & VDI login apps via DevOps rather than ClickOps
- Led migration of on-prem PCF Infra into Azure, including Data Architecture, Dynatrace Dashboards to track progress, etc
- Consolidated Azure VNET Subnet Terraform modules into one module, reducing codebase by 67%, preventing unnecessarily diverging functionalities, &
- Created custom OpenTelemetry traces, Prometheus queries, & GCP alerting policy (via Terraform) to comply with Service Level Objective (SLO) for client Gemini-based document-processing application.
- Created custom GCP SLO, SLI filters, Monitoring Alert Policy, Logs-based Metrics, & Alert Notification Channel to meet batch document-processing Service Level latency & availability production Objective & speed up prod incident resolution for application used to **~\$110 billion in financial assets**.
- Sourced, trained & supervised international team of 5+ freelancers to handle day-to-day business operations work for the firm, including sourcing & qualifying new work leads
- Sped up **backlog refinement meetings by ~19%** & **saved firm ~\$18k+ in Labor Capacity annually** by enhancement client's Vercel/Next.js/Firebase Scrum Poker web app by adding data analytics functionality, increasing Project Manager confidence in story point assignments
- ContentMachine - Gained ~100k views on TikTok so far by creating a fully automatic cloud-deployed pipeline for AI-generated short-form entertaining videos. Uses Python, AWS, OpenAI's API, NLP, & more

Duke Energy Corporation, Remote (Charlotte, NC)

Jul 2021 - Jan 2024

Senior Software Engineer

- Saving Duke ~\$1M in Labor Capacity by end of 2024 by leading backend & DevOps for Orbit, an iPad app replacing manual data acquisition and logging at **~100 Duke power plants with several thousand users**. Used Python, AWS (Lambda, API Gateway, S3, IAM, CloudWatch, DynamoDB, VPC...), Node.js, Terraform, Bash, Concourse, & more
- Enabled user file attachments by integrating Orbit API with AWS S3 with custom Terraform module
- Enforced 90% code coverage for Python unit tests, ensuring code reliability
- Created Angular sister web app to go along with Orbit iPad app
- Coordinated, managed, and performed production releases
- Accelerated prod incident tracking with DynaTrace/AWS X-Ray dashboards, to ease process of issue tracking
- **Eased onboarding and reduced release times by 30%** by refactoring API endpoint Terraform code
- **Sped up AWS Lambda functions by ~21%** using shared runtime environment & caching
- Architected, pitched, & created custom "documentation generation" component to streamline communication of new API features. Uses EventBridge, CloudTrail & more
- **Shrunk Concourse codebase by ~35%** by migrating from Terraform OSS to Enterprise
- **Reduced infra PR merge time by 8-24h** by migrating AWS infra from shared to dedicated environment
- Enhanced code quality & security by integrating SonarQube, Sonatype IQ, & CheckMarx into CI/CD pipeline
- Boosted reliability of Orbit API with Postman integration/load tests, written with auto-generating web-scraper
- **Reduced Integration Test PR merge time, & codebase size by ~94%** with Chai.js/Javascript Postman helper functions
- **Led collaborative efforts across ~100 engineers** with 5+ "Communities of Practice", along with 6+ project teams, enabling scalable & reusable features and cross-project collaboration
- Enhanced custom SwaggerDoc security w/custom Node.js authorizer, ensuring incoming traffic was from Duke network

Capital One, McLean, VA

Summer 2017, 2018; Aug 2019 - Jun 2021

Software Engineer; Technology Development Program Mentor; Software Engineer Intern

- Saving Capital One **~\$10k in fines per customer annually** by creating the data fulfillment pipeline for CCPA compliance for its **~100 million customers**, enhancing customer privacy. Used Python, AWS, Docker, Java Spring Boot, Apache Airflow, Apache Kafka & more
- Wrote component for processing & uploading zip files of customer assets (CCPA records) to S3 & alerting web app team via Apache Kafka so they can email customers
- Created Kafka consumer component to process privacy requests ready for processing by our pipeline
- Helped create Python component “Query Builder” to dynamically generate PostgreSQL & Snowflake queries
- Facilitated project shifts for improved value-add & return offers for 2 interns while leading professional development for 5 engineers
- Ensured seamless CI/CD by increasing unit test coverage to 90%+ for all components in our pipeline
- **Screened 20+ software engineer applicants** & got 1 peer hired at the firm by engaging in technical interviews & recruiting
- Supported Capital One pilot-program data warehouse SaaS (Slingshot) - Python, Java Spring Boot, AWS ECS, Docker, AWS DynamoDB, protobuf/gRPC, React, Snowflake - including creating reusable React components
- Summer 2017 - created reusable AngularJS library for handling SSO for high-security commercial banking applications

Lockheed Martin, Manassas, VA

Summer 2015, Summer 2016

Tech Intern; Senior Tech Intern (held Secret Security Clearance in 2016)

SKILLS

Languages, concepts:

Python (2, 3), Bash, HCL (Terraform OSS, Enterprise, Cloud; AWS, AzureRM, AzAPI), JavaScript (Node.js, React, Angular), Docker, Kubernetes, Java (Spring Boot 3), Go, PowerShell, Lua, Scala, Groovy, Progress Chef; unit testing, integration testing, smoke testing, performance testing, test-driven development; CI/CD (continuous integration and continuous deployment), DevOps, SecOps, GitOps, Databases, SQL (PostgreSQL/Postgres, MySQL, SQLite); NoSQL (DynamoDB, MongoDB), osquery (osquery.io); Prometheus Query Language (PromQL); GCP Logging Query Language (LQL), Monitoring Query Language (MQL); microservice architecture, cloud pipelines, data pipelines, CI/CD pipelines; Object Oriented Design, User- Centered Design; REST/RESTful APIs; OAuth2 flow; cloud infrastructure, Infrastructure as Code (IaC), configuration management, software development best practices, troubleshooting, refactoring, analyzing & prioritizing business objectives; monitoring and logging; containerized workloads, serverless architecture; orchestration; serialization; automated testing; debugging; containerization; large language models, prompt engineering; distributed systems; B2B SaaS applications; networking, VLANs, DNS leaks, VPNs, home networking, proxy servers, configuration drift (“config drift”)

Libraries/frameworks:

pip, pipenv, pytest, requests, boto3, unittest, coverage, assertpy, requests_mock, moto, pandas, NumPy, sqlsmith, Selenium, yt-dlp, MoviePy, mutagen, pydub, pickle, Python Imaging Library (PIL/Pillow), PRAW (Python Reddit API Wrapper), spaCy, NLTK, OpenAI, Tkinter, inflect, Django; TikAPI; nvm, npm, gatsby, yarn, webpack, Chai.js, GraphQL, SquareSpace; gradle (8.10), Maven, Spring Web, Spring Security, JUnit, PowerMock, Mockito, Apache Avro; Hammerspoon, AutoHotKey; OpenTelemetry (Spans, Traces, Metrics)

Tools:

macOS, Windows, linux, unix, Ubuntu; Concourse, GitHub Actions, Jenkins, Postman, Insomnia; terraform-docs, tfint; Amazon Web Services (API Gateway, Lambda, CloudWatch, CloudTrail, IAM, X-Ray, S3, CloudFront, DynamoDB, EC2, ECS, Route 53, WAF, VPC, EventBridge, CloudFormation templates, Secrets Manager), Azure (Entra ID, AKS, App Config, Azure Postgres, SQL Managed Instance, Azure SQL, VNET, Subnet, Cosmos DB, KeyVault, Private Endpoint, Virtual Machines (Linux, Windows), Subscriptions, Multi-Region), Microsoft Intune, VenaFi, Google Cloud (“GCP” - CloudRun, Firebase, Firestore, Cloud Storage, Monitoring, Alerts, Buckets, Prometheus), Prometheus, Netlify; ffmpeg, pydub; PlantView, Apigee, DynaTrace; HashiCorp Envconsul, Vault; SonarQube, Checkmarx, Sonatype IQ; Artifactory, Sonatype Nexus, Liquibase; Git/GitHub, BitBucket; cURL, Snowflake, HomeBrew, direnv, Wireshark, Little Snitch; Splunk, PagerDuty; Apache Airflow, Kafka, ZooKeeper; Agile, Scrum, SAgile, JIRA, Confluence; OpenAI API (Whisper, GPT), Gemini API (Pro, 1.5 Flash), Eleven Labs API, TikTok API, Pexels API, Pixabay API, Playwright; Swagger, OpenAPI; JSON, YAML, XML, HTML; Parallels Desktop, VMWare Fusion, Citrix Workspace, Citrix Viewer, Windows App; ChatGPT (o1-preview, o1-mini, 4o, 3.5), Anthropic’s Claude (3.5, 3.0 - Sonnet, Haiku, Opus), Google Gemini (1.5 Flash, Pro), DeepSeek, Google Gemma, Amazon CodeWhisperer, GitHub Copilot, Grok (1, 2), Venice.ai, Meta Llama (3.2); bazel, buildifier; Vanta; OhMyZsh, GitLens

Soft/People:

Project management, SDLC (software development lifecycle), talent development, mentorship, recruiting, public speaking, leadership, code review, problem-solving, decision-making (decision matrices), writing user stories, constructive feedback; thought leadership, technical sales, social engineering, champion building, consulting, sales techniques, persuasion; Champion Building; loss aversion framing (“pitfall-based sales”)