

# JOHN PRATT

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## EXPERIENCE

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**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 while I wind down operations to take on my next full-time/long-term contract role.
- **Secured ~\$20T in client assets (30k customers)** by developing a Java Spring Boot library for Okta Auth that enhanced REST API security with JWT validation and Azure Entra integration, **reducing security incidents by 25%.**
- **Reduced deployment errors by ~40%** using a custom Azure Cosmos DB Terraform module; cut Azure costs by ~\$35k/month by optimizing CosmosDB and requiring approval for high-cost Terraform changes.
- **Boosted database performance by 31%** with an OracleDB-to-Azure PostgreSQL migration and sped up incident response by 18% via custom Google Cloud alerts.
- **Enhanced Snowflake data retrieval by 35%** for 1M vehicles with a Python REST API, and lowered security incidents by 20% through DevOps/SecOps best practices for 60+ engineers.
- **Increased remote Virtual Desktop login speed by 93%** for ~60 engineers using Python Selenium automation and macOS hotkeys
- **Cut document upload times by 91%** with automated LinkedIn profile scraper.
- **Accelerated deployment speeds by 40%+** by consolidating Terraform modules for Azure (subnets, VNETs, KeyVault, CosmosDB) and improved resiliency for 100+ engineers by upgrading AzureRM modules to v4 with multi-region support.
- **Reduced manual tasks by 45%** using PowerShell for email/calendar forwarding and VDI logins, and led migration of on-prem PCF to Azure, enhancing data architecture with Dynatrace dashboards.
- **Boosted uptime and reduced latency by 22%** for a Gemini-based document-processing app using OpenTelemetry, Prometheus, and GCP alerts, and improved system reliability by 18% for a client's **~\$110B in assets** with refined GCP SLO/SLI policies.
- Built and led a global team of 5+ freelancers for BizOps
- **Cut \$100k/month** in infrastructure costs via Azure cost audits
- **Generated 100k TikTok views** with a cloud pipeline for AI-generated videos using Python, AWS, OpenAI's API, and NLP.

**Duke Energy Corporation**, Remote (Charlotte, NC)

**Jul 2021 - Jan 2024**

*Senior Software Engineer*

- Saved Duke **~\$1M in Labor Capacity annually** 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
- 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**, Richmond, VA; McLean, VA

**Summer 2017, May 2018 - Jun 2021**

*Software Engineer; Technology Development Program Mentor*

- Saved 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

**Lockheed Martin**, Manassas, VA

**Summer 2015, Summer 2016**

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

## **EDUCATION & CERTIFICATIONS**

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**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**

**2023-2025**

[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](#)

**Microsoft Azure**

**2024-2025**

[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](#), [Identity and Access Administrator Associate](#), [Cosmos DB Developer Specialty](#), [Virtual Desktop Specialty](#), [SecOps Analyst Associate](#), [AI Fundamentals](#), [Security, Compliance, & Identity Fundamentals](#), [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](#), [AWS Platform Architect](#), [Azure Platform Architect](#), [GCP Platform Architect](#), [Databricks Fundamentals](#), [Data Analyst Associate](#)

## Other organizations

2020-2025

[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); [Confluent Fundamentals](#), [Certified Apache Kafka Developer](#), [Certified Apache Kafka Administrator](#), [Certified Cloud Operator](#) (Confluent); [GitHub Actions certified](#) (GitHub)

## SKILLS

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### Languages, concepts:

Python (2, 3), Bash, HCL (Terraform OSS, Enterprise, Cloud; AWS, AzureRM, AzAPI, Google), 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), KQL (Kusto Query Language), 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 management, 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, root cause analysis; 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, FlatCar; 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, App Insights, Azure Kubernetes Service (AKS), Azure Postgres, SQL Managed Instance, Azure SQL, VNET, Subnet, Cosmos DB, KeyVault, Private Endpoint, Virtual Machines (Linux, Windows), Function Apps (Linux, Windows), Subscriptions, Multi-Region, Resource Graph Explorer, Azure Dashboards, Purview, SignalR, Azure Monitor, Azure Monitor Action Groups, Front Door, Stream Analytics, Azure Automation), Microsoft Intune, VenaFi, Google Cloud (“GCP” - CloudRun, Firebase, Firestore, Cloud Storage, Monitoring, Alerts, Buckets, Prometheus), Prometheus, Netlify, Vultr, Tailscale, WireGuard, OpenVPN, PiVPN; 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, SAFe, JIRA, Confluence; OpenAI API (Whisper, GPT), Gemini API (Pro, 1.5 Flash), Eleven Labs API, TikTok API, Pexels API, Pixabay API, Playwright; Swagger, OpenAPI; ServiceNow; 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”)