

# JOHN PRATT

Vienna, VA | 571-293-1522 | [john@pratt-solutions.com](mailto:john@pratt-solutions.com)  
[linkedin.com/in/john-pratt787](https://www.linkedin.com/in/john-pratt787) | [pratt-solutions.com](https://pratt-solutions.com)

## EDUCATION & CERTIFICATIONS (validation links included)

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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

2023-2024

[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](#), [Cosmos DB Developer Specialty](#), [Azure AI 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 \(Python\)](#), [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

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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 as my schedule allows; winding down operations & seeking next full-time/long-term role
- Enhanced security of client's ~\$20 trillion in assets (~30k customers) with Java Spring Boot library for Okta Authentication & Authorization for REST APIs, JWT decoding/validation via Azure Entra & token signing with KeyVault
- Improved DevOps, security, & infra stability via custom Azure Cosmos DB Terraform module with user-assigned identity authentication
- Saved client ~\$35,000/month in Azure costs by cleaning up CosmosDB resources & locking down Terraform module to require approval for costly resources
- Led transition from OracleDB to Azure PostgreSQL DB, comparing it to Azure SQL Managed Instance & SQL
- Accelerated incident response by ~20% with custom Google Cloud alerts

- Enhanced management of 1 million vehicles via Python REST API with Snowflake queries deployed to AWS
- Improved security & efficiency of SDE by writing DevOps & SecOps Best Practices guides for 20+ engineers
- Accelerated remote Virtual Desktop login for ~60 engineers by ~93% with Python Selenium & macOS hotkey automation
- Reduced document upload times by 91% with Python browser automation to scrape LinkedIn profiles & upload to certification systems
- Consolidated client's Terraform modules for Azure resources like subnets, VNets, KeyVault, Cosmos DB, etc
- Upgraded AzureRM Terraform modules to AzureRM 4.0 & added multi-region support for Cosmos DB & KeyVault
- Created PowerShell scripts to automate tasks like email/calendar forwarding & VDI login apps via DevOps
- Led migration of on-prem PCF Infra to Azure, including Data Architecture & Dynatrace Dashboards
- Created OpenTelemetry traces, Prometheus queries, & GCP alerting policy for Gemini-based document-processing app
- Developed GCP SLO, SLI filters, Monitoring Alert Policy, & Alert Notification Channel to improve latency & availability for **~\$110 billion in financial assets**
- Sourced, trained & supervised international team of 5+ freelancers for BizOps & new work leads
- Added Multi-Region & AzureRM 4.0 support to Azure Terraform modules for 100+ DevOps engineers, enhancing infra resiliency & UX for clients
- Led audit of **~\$100k/month** Azure infra to ensure compliance & clean up unused resources
- ContentMachine: Gained **~100k TikTok views** with cloud-deployed pipeline for AI-generated short-form videos with Python, AWS, OpenAI's API, & NLP

## 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

## **SKILLS**

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### **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), 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, 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, 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; 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")