David Miserak

Sr. Backend Engineer

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Education

2021	**Master of Science in Software Engineering**, *Vermont Technical College*, VT
2015	**Bachelor of Science in Software Engineering**, *Vermont Technical College*, VT

Experience

10/2017 - Present — **Senior Software Engineer & Founder**, *Vermont Data Systems*, Self-Employed

Current Engagement (2024 - Present):
○ Design RESTful and GraphQL APIs handling 100K+ requests/min using Python and Go.
○ Architect event-driven microservices with message queuing and pub/sub patterns.
○ Lead API design reviews and establish backend engineering best practices.

Previous Engagements (2017 - 2022):
○ Architected core API modules for $70M government platform serving 2M+ citizens.
○ Built automated testing framework for backend services, saving $5M in contractor costs.
○ Developed real-time financial data APIs processing 50GB+ daily with sub-second latency.
○ Led backend development teams building API solutions.

Note: Maintained consultancy while pursuing W2 opportunity at GDMS (2022-2024)

01/2022 - 10/2024 — **Advanced Software Engineer**, *General Dynamics Mission Systems*, Remote
○ Redesigned legacy monolith into microservices, improving throughput 20x and reducing costs 60%.
○ Built distributed testing framework reducing test execution from 8 hours to 45 minutes.
○ Led cloud migration of backend systems achieving 99.99% uptime SLA.
○ Developed high-throughput data processing APIs handling 1GB/s data streams.

08/2016 - 10/2017 — **Senior Software Engineer (Contract)**, *American Express*, Phoenix, AZ
○ Delivered critical payment API fix in 6 weeks (previous team blocked 18 months), saving $3.6M.
○ Built real-time encryption service APIs processing 1M+ transactions/day with p99 latency <50ms.
○ Led backend team delivering secure messaging APIs for 50+ enterprise clients.
○ Optimized critical API endpoints reducing transaction processing time by 40%.

12/2015 - 08/2016 — **Software Engineer**, *Human Genetics and Genomics Lab at UVM*, Burlington, VT
○ Developed genomic data visualization web app using React and D3.js, serving 5+ researchers.
○ Built distributed computing pipeline on 20-node cluster, reducing analysis time from weeks to hours.
○ Created RESTful APIs for accessing TB-scale genomic databases with sub-second latency.

11/2014 - 11/2015 — **Software Developer**, *Vertek Corporation*, Colchester, VT
○ Built payment processing monitoring tools preventing $400K/day revenue loss across 100+ sites.

Technical Skills

Programming Languages: Python, Java, JavaScript, TypeScript, Go, SQL, Ruby, C++, C

Back-end & APIs: Django, Flask, Spring Framework, Express.js, Node.js, Ruby on Rails, RESTful APIs, GraphQL

System Architecture: Microservices, Cloud-native development, Serverless computing, Container orchestration

Databases: MySQL, PostgreSQL, MongoDB, BigQuery, NoSQL databases, Database design, SQL optimization

Cloud & DevOps: AWS (Lambda, ECS, S3, RDS), Docker, Kubernetes, OpenShift, Terraform, CI/CD pipelines

Front-end: React, Angular, React Native, Responsive design, Component architecture

Development Tools: Git, GitHub, Agile/Scrum, Linux, Shell scripting, Test-driven development