Prashanth Kumar

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Education

New York University **August 2024 – May 2026**
Master of Science in Computer Science *New York*

Visvesvaraya Technological University **August 2017 – August 2021**
Bachelor of Engineering in Computer Science *Bengaluru, India*

Relevant Courses

- Algorithms
- Software Engineering
- Machine Learning
- Artificial Intelligence
- Computer Networks
- Cloud Computing
- Database Management
- Big Data
- Operating System
- Compiler Design

Work Experience

New York University IT **January 2025 – Present**
Software Engineer Intern - Enterprise Data Management *New York*

- **Web Development**: Enhanced the NYU Business Intelligence portal for over 500 users using AWS Lambda for APIs and React.js for the frontend, improving data access and UX.
- **Backend Optimization**: Automated data extraction using AWS Lambda and Tableau API, replacing manual script processing. Reduced runtime by 30%, enhancing report generation efficiency for 100+ user across various department.

Kampd **August 2021 – August 2024**
Software Engineer - Backend (Kampd Social Media App) *Bengaluru, India*

- **API Development**: Built RESTful APIs in GoLang and Node.js for 10+ core microservices (signup, user, content, community etc) in the Kampd social media application, improving scalability and maintainability.
- **Media Streaming**: Designed and implemented HLS media streaming using Golang and FFmpeg with parallel processing, achieving sub-200 ms latency for 1,000+ concurrent streams per instance, a core component of Kampd's video streaming.
- **API Optimization**: Migrated legacy Node.js APIs to Golang, reducing latency from 400–500 ms to 120–150 ms and increasing throughput from 120 to 600 requests/sec per pod. Revamped the signup service using Golang with OAuth2 authentication (AWS Cognito), achieving a 70% performance improvement.
- **Security**: Built a configurable proxy service for API authentication, enabling a pluggable authentication layer and reducing development time by 50 hours per feature.
- **DevOps**: Deployed and managed 50+ Kubernetes microservices on AWS EKS clusters, using Terraform for infrastructure-as-code (IaC) to automate provisioning and configuration. Achieved 99.9% uptime, 50% faster deployments.

Data Weave **March 2021 – August 2021**
Data Engineer Intern *Bengaluru, India*

- **Data Automation**: Automated a web scraping data pipeline using Python and Airflow, reducing manual processing time by 70% and improving data reliability by 40%.
- **Data Extraction**: Enhanced data extraction scripts using Python and regex, enabling the processing of 1,000+ HTML pages daily with 95% accuracy for consistent and efficient web scraping.
- **DevOps**: Configured EC2 instances and Apache Kafka to stream and process 100GB+ raw data points daily, enabling real-time data processing and analytics.

Technical Skills

- **Programming:** Go, Python, JAVA, C#, C, C++, JavaScript/TypeScript, HTML5, CSS
- **Frameworks:** MVC, REST, Gin, Node.js, Flask, ASP.NET, React.js, Tailwind CSS, TensorFlow, PyTorch, Scikit
- **Databases:** SQL (MySQL), NoSQL (MongoDB, Cassandra)
- **Software Development:** Advanced Data Structures, Algorithms, Object-Oriented Programming, Web Development, REST API, Microservices, Distributed Systems, Security (OAuth2, JWT, Encryption)
- **Cloud and DevOps:** AWS (EC2, EKS, S3, Lambda, VPC, IAM, Cognito, RDS, ALB, API Gateway, Secrets Manager, CloudFront, CloudFormation), GCP, Docker, Kubernetes, Terraform, Helm, CI/CD (Jenkins, GitHub Actions)
- **Developer Tools:** Git, Gitlab, Github, JIRA, Linux, Version Control, Kafka, Prometheus, JUnit, PyTest

Projects

Blockchain Certificate Management System [GitHub] *C#, React.js, Computer Vision, Python*

- Developed a blockchain-based certificate system using C#, ASP.NET, and React.js, featuring image steganography for immutable verification. Designed for horizontal scaling and high availability, reducing security risks by 99%.

Distributed Task Processing System – ServerPlus *C#, SQL, TCP, .NET WinForms*

- Designed a distributed job processing server utility in C# using .NET WinForms, scaling across 8+ nodes to manage diverse workloads, including machine learning, image classification, and SMTP operations etc. Achieved an 80% throughput improvement by optimizing task distribution and resource utilization.