

# Koushik Pernati

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## Professional Summary

Around 5 years of experience in IT which includes software development, designing and provisioning architecture. Currently an Enterprise Cloud Architect at GE, passionate about developing scalable and performance effective infrastructure. Adept at providing cloud based solutions in the field of machine learning and web development. Presented on AWS Appstream 2.0 at AWS Re:Invent 2019, presented on creating microservices using AWS Lambda and AWS API Gateway at HackBU event in Binghamton University, and also presented on GEs usage of AWS to lift and shift apps to cloud at Siena College. Experienced in full project scope of applications from initial steps of project design and requirements to project deployed/closure state. Technical expertise in troubleshooting and developing new software to solve architectural issues.

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## Technical Skills

- Proficient with provisioning infrastructure with **AWS Cloud Formation** and **Bash Scripting** utilizing **AWS CLI**.
  - Proficient on AWS Services: **VPC, IAM, Route53, ELB, EC2, RDS, S3, Glacier, CloudWatch, CloudTrail, CloudFront, DynamoDB, Lambda, API Gateway, Cognito, Appstream 2.0, SNS, SQS, EMR**, etc.
  - Proficient with **Java, Python**, and **NodeJS** programming language and experienced in **JavaScript, CSS** and **PHP**.
  - Experienced in working with **Windows** and **Linux OS**.
  - Experienced utilizing **Eclipse/Cloud9** IDEs and **GitHub** version control.
  - Strong knowledge in troubleshooting network issues within AWS.
  - Experienced deploying different SQL databases (**PostgreSQL, MySQL, Microsoft SQL server, Aurora**) in AWS.
  - Experienced using **JSON** and **YAML**.
  - Familiar with **AWS Management Service OpsWorks** for **Chef Automate**.
  - Familiar with automation platforms such as **Jenkins** for CI/CD processes.
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## Experience

### *Sr. Enterprise Cloud Architect – GE Digital, Schenectady, NY*

**January 2017 – Present**

- Develop infrastructure and implement security measures leveraging AWS
- Migrate complex, multi-tier legacy and on premises applications to AWS
- Design and deploy scalable, highly available, and reliable applications on AWS
- Used **AWS Appstream 2.0** to host Citrix based thick client applications to the cloud
- Create **Infrastructure as Code** using **Cloud Formation** templates in AWS
- Provide app teams with AWS cloud based solutions to improve performance of applications
- Deploy serverless apps utilizing AWS services: **S3, DynamoDB, API Gateway** and **Lambda**
- Manage full project scope of applications from initial step of project design and requirements to project closure state
- Install and deploy different types of servers on **EC2** such as **Apache, Tomcat** and **Node**
- Integrate new technologies such as **Alexa** into office environment to improve productivity
- Utilized AWS services **ML** and **Rekognition** with **AWS Deeplens** to create object detection apps
- Troubleshoot network issues via **Route Tables, Network ACLs** and **Security Groups**
- Implement cost-control strategies to improve saving opportunities using **AWS Cost Explorer** and **AWS Billing Console**
- Used **Agile Scrum** methodology with insource and outsource team members
- Deployed projects into the **AWS GovCloud** for customers requiring US compliance in data security
- Perform weekly architecture reviews for app teams implementing changes in new and existing applications

**Data Analytics Web Development – Siena College, Loudonville, NY****September 2016 – January 2017**

- Worked with Siena Research Institute on developing an interactive searchable web page that presents the data to the public from the Research Institute's annual CEO Study
- Extracted quantitative data from Microsoft Excel using Java to form JSON strings
- Used JavaScript FLOT library to create interactive graphs for data visualization

**Junior Solution Architect Intern – GE Power, Schenectady, NY****May 2016 – August 2016**

- Worked on managing multiple AWS Projects to make sure go live dates were met
- Worked with the cloud team to test different phases of deployments to make sure any missed deadlines were streamlined smoothly
- Developed an enterprise mobile SaaS solution for GE Schenectady Campus and deployed the mobile app in 30 days
- Gained associate level understanding of AWS architect, build, and troubleshoot through Cloud project management
- Worked with AWS IAM users, roles, and groups to implement AWS access for app teams

**Big Data and AI Analyst - Dumbstruck, Albany, NY****January 2016 – April 2016**

- Created a **Java** software to convert video files to audio files using **JAVE open source** project
- Worked on analyzing and creating speech analysis from audio files using **Java**
- Used various resources to analyze and convert speech to text such as **CMU Sphinx** and **VoiceBase API**
- Used **IBM Watson** services to convert speech to text and retrieve sentiment analysis
- Created a **Java** application to retrieve demographics information based on zip code using a web service

**Computational Linguistics Research Assistant - Siena College, Loudonville, NY****May 2015 – July 2015**

- Worked on a **National Science Foundation (NSF)** funded research program where I created a software system in **Java** to extract information from abstracts in research papers and documents
- Employed the artificial intelligence technique of **genetic algorithm**, using results from **neural networks** algorithms
- Resulted in a summary and categorization of abstracts into specific groups that each abstract focused on
- Determined the abstracts that would be placed into categories

**Computational Linguistics Research Assistant - Siena College, Loudonville, NY****June 2014 – August 2014**

- Worked on a team in **National Science Foundation (NSF)** funded research program where I created a software system in **Java** to extract information from public comments that were submitted to the New York State Department of Environmental Conservation
- Used computational techniques to understand the public's view toward environmental issues using supervised machine learning
- Cleaned and categorized the corpus into sections which helped summarize the data
- Published the findings and results in 2014

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**Publications**

Public Perceptions of Shale Gas Development in New York State: The Role of Media. 67<sup>th</sup> Annual Meeting of NYSEA. (With J. Booker, S. Habib, M. Hinojosa, M. Bianchi, S. Vukovic and K. Pernati). Siena College, Loudonville, NY October 10-11, 2014

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**Certifications****AWS Certified Solutions Architect - Associate****AWS Certified SysOps Admin - Associate****AWS Certified Developer - Associate**

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**Education****MS in Artificial Intelligence & Machine Learning ~ Georgia Institute of Technology, GA****2019 - Present****BS in Computer Science, Minor in Mathematics ~ Siena College, NY****2013 - 2017**