PARTH SETHI (SETH)

+1 (352) 745 9455
sethiparth.ps@gmail.com
https://github.com/sethiparth
https://sethiparth.github.io

Experience

Software Development Engineer **Amazon Web Services (AWS), Seattle, WA** **Oct 2019 – Present**

- **Reboot Migration on Degrade**: Rearchitected customer maintenance service that enabled EC2 to send out 'reboot' instance events in 25 public regions on degraded hardware. It allowed more than 556,000 EC2 customers to retain their instance data even if their instance hardware was degraded/faulty.
- **Scheduler Service:** Redesigned and implemented scheduling process for all EC2 instance maintenance events to smartly pick up future time slots for all maintenance requests using best fit approach. This new update removed the need to run scripts manually every day and reduced number of errors for no time slot available in order of 100s every two weeks.
- **Customer Pain Index:** Designed and implemented an EC2 core level key performance indicator (KPI) to translate all EC2 instance maintenance events into a pain index which helped to predict and reduce thousands of customer escalations around those maintenance events.
- **Self-Maintenance:** Automated operational task of manual escalations for maintenance events on internal EC2 instances owned by other teams called Self maintenance. This process reduced 4000 manual escalations reducing hundreds of developer hours in last 1 year.
- **Event Windows:** Designed scheduling algorithm to give preference to the time windows chosen by customers in which EC2 can schedule any maintenance events on their instances. This has enabled more than 10,000 customers to choose time windows for any maintenance on their EC2 instances in past 6 months.

Software Engineer **OM Partners, Atlanta, GA** **Feb 2019 – Oct 2019**

- Designed a new scheduling algorithm to distribute tasks over different time buckets (time periods) based on user input while optimizing the rate of work executed by those tasks improving time efficiency.
- Implementing optimization strategies using C++17 to improve "OPAL" which is a customized language to implement supply chain inventory management and logistics.

Teacher's Assistant **University of Florida, Gainesville, FL** **Aug 2018 – Dec 2018**

- Served as a teacher's assistant for a course Database Management Systems for a class of 30 students.
- Helped students develop projects using oracle database as their semester long projects.

Skills

Software: [proficient] Java, C++, SQL, NoSQL [familiar] Scala, Python, Ruby
Process and Tools: Agile, Kanban, Source code version control using Git
AWS Tech stack: DynamoDB, Redshift, RDS, S3, Lambda, Kinesis, Quicksight, EC2, Cloudwatch, Cloudformation, IAM, KMS, SNS, SQS

Education

Master of Science **University of Florida, Gainesville, FL** **Aug 2017 – Dec 2018**
Major: Computer Science. GPA: 3.56/ 4

Bachelor of Technology **Jaypee University of Information & Technology, Solan, India** **Aug 2013 – May 2017**
Major: Electronics and Communication. GPA: 9.1/ 10

Projects

JAVA based Compiler Design **Java, ASM, JVM Bytecode, Junit** **Jan 2018 – May 2018**

- Implemented a scanner using a top-down parser based on custom grammar to implement a strongly-typed programming language, using visitor pattern for type checking.

P2P File Sharing Software **Java** **Jan 2018 – May 2018**

- Implemented a P2P file sharing system similar to BitTorrent for file management operations between peers.
- Improved download speed across different computers by 50 % by using special message types for choking and unchoking.

Data compression algorithm **C++** **Jan 2017 – May 2017**

- Implemented Huffman encoding technique to compress a binary file and used a cache optimized 4-way min heap for decoding the given file efficiently by 80%.