

# Aranta Chatterjee

Software Development Engineer with 10 years of engineering experience with expertise in reliably driving projects to completion from scratch. *Bachelor of Computer Science and Engineering from Jabalpur Engineering College, India and Master of Information Systems Management from Carnegie Mellon University, USA.*

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## EXPERIENCE



### GoDaddy, Remote Senior Software Developer

AUG 2021 - PRESENT (1.7 YEARS)

- Wrote code in **Python** and **Golang** to build, test and maintain Threat Tools platform for capturing and triaging risks associated with Indicators of Compromise (IoCs) submitted by end users. Used **React JS** and **Node JS** for front-end development.
- Integrated Threat Tools with third-party APIs (for example, VirusTotal, RecordedFuture etc.) which assist in quick lookup of IoCs during security incidents to help the Incident Response Teams contain security risks as quickly as possible.
- Utilised **AWS lambdas (serverless computing)** for deployment of Threat Tools. Utilised **DynamoDB** as the back-end data store.
- Utilised **Elastic** indexes for storing data logs generated by Threat Tools usage and **Kibana** dashboard for visualisation of usage metrics.
- Built and deployed a custom DNS callback detection capability for application vulnerability detection and penetration testing. Containerized the custom DNS server and API using **AWS ECS (Elastic Container Service)** on **Fargate**. Utilised **Redis** as DNS query cache.
- Created **CI/CD pipelines** using **GitHub Actions**.
- Contributed to project architecture documentation on an on-going basis. Patched at-risk code and upgraded software on an ongoing basis.
- Wrote and published internal blogs on security risks such as Evilginx, nginx-based tool that enables by-pass of 2-factor authentication.
- Mentored newer team members.



### Techstra Solutions, NYC, USA Digital Solutions Specialist

FEB 2017 - AUG 2021 (4.5 YEARS)

- Led development, testing and maintenance of Techstra's Transformation Performance Indicators (TPI) platform to monitor, assess and monitor the progress of their digital transformation initiatives.
- Used **Java (MVC and Spring Boot)** to design and implement TPI.

## SKILLS

### Programming/Scripting

#### Languages:

Java, Python, Golang,  
JavaScript, React JS, Node JS,  
VBA, HTML, CSS

#### Relational and

#### Non-Relational Databases:

MS SQL Server, PostgreSQL,  
MongoDB, Azure Cosmos DB,  
AWS DynamoDB, Redis

#### Cloud Platforms:

AWS, MS Azure

#### Tools:

Docker, Kubernetes, Swagger,  
OpenAPI, SonarQube,  
Tableau, Git, GitHub Actions,  
Slack, Okta, MS Visio, MS  
Project, Yammer, MS Teams,  
JIRA and Taiga

#### Functional:

Agile software development  
methodologies (Scrum and  
Kanban), DevOps, Site  
Reliability, TDD

## LANGUAGES

English, Hindi

- Wrote **REST APIs** to augment platform functionality on an ongoing basis.
- Migrated TPI to the cloud (**Microsoft Azure**) from on-prem to make it enterprise usage ready and auto-scaleable. Migrated TPI data into **Azure CosmosDB** from **MongoDB**.
- Created 48 visualisations across 9 **Tableau** dashboards. Optimised the published dashboards for quick data retrieval and real-time interaction. Published and maintained a Tableau Online site.
- Created Natural Language Processing (NLP) and sentiment analysis scripts using **Python** libraries and ML libraries provided by GCP and IBM Watson, for extracting actionable insights from the collected TPI data.
- Mentored interns. Reviewed their code and contributions to ongoing projects and integrated them into TPI.
- Gathered user feedback, planned upcoming sprints, features and prioritised change requests.
- Designed and built end-to-end **Robotic Process Automation (RPA)** solutions using **Blue Prism** and **MS SQL Server**, to automate manual and tedious repeatable BAU (Business As Usual) tasks. Deployed RPA automations to **MS Azure VMs (Virtual Machines)**.
- Created POCs (Proof of Concepts) for OCR (Optical Character Recognition) techniques provided by **Azure** and **Blue Prism**.
- Maintained company-wide GitHub organisations. Added new engineers to the appropriate orgs and reviewed all access requests centrally.
- Performed bi-weekly product demos at the end of each sprint to Techstra's existing and new clients to showcase newly added features. Recorded demos for re-use by the leadership team and account managers during sales pitches.



### **A. T. Kearney, Pittsburgh, USA** *Student Lab Consultant*

SEP 2016 - DEC 2016 (4 MONTHS)

- Modelled a matching algorithm for finding the most compatible families for children in foster care using integer programming with an aim to minimise the likelihood of disruption in the lives of foster parents and children.
- Tested, verified and enhanced the algorithm to auto-adapt itself to handle anomalies.
- Designed a data pipeline and recommended best practices for handling big data.



### **Carnegie Mellon University, Pittsburgh, USA** *Full Stack Developer*

MAY 2016 - AUG 2016 (4 MONTHS)

- Created a **C# WinForms** app to conduct experiments to identify behavioural traits in participants in presence and absence of search engine advertising. Replicated Google-like search environment.
- Developed a content website for analysing online consumer activity. Worked on **Search Engine Optimization (SEO)**, implemented **Google Analytics** solutions, created **MySQL** database and wrote **PHP** scripts to track visitor activity.



### **Gritsa Technologies, Noida, India** *Software Engineer*

JUNE 2014 - MAY 2015 (1 YEAR)

- Created **RESTful API** services to receive and store demographic and statistical data in JSON format from remote data collectors (software installed on strategically placed cameras) using **C#** and the **.NET framework**.
- Engineered data migration system for transmission of collected demographic and statistical data from **MongoDB (NoSQL)** to **PostgreSQL**. Created cron jobs to execute daily migrations.



## **TATA Consultancy Services Ltd (TCS), Pune, India** *Assistant System Engineer*

JULY 2013 - MAY 2014 (11 MONTHS)

- Executed complete software development life-cycle for engineering the Airbus Management module of Online Flight Management System using C#, ASP.NET, JavaScript and MS SQL Server.

## **ACADEMIC PROJECTS**

### **Cryptographic Communication and Authentication (CMU) — Java**

Developed TCP/IP based client and server side programs which communicate using a combination of symmetric (TEA) and asymmetric key encryption (RSA) algorithms and transmit client location securely to the server.

### **Web Scraping (CMU) — Java, HTML**

Developed a Java web application using the MVC architecture which performs web scraping to extract images and their descriptions from a website's HTML code then displays only the content requested by the end user.

### **Natural Language Processing (CMU) — Python, NLTK**

Built an NLP tool using Python that scrapes Opera's website for error logs and performs normalisation, stemming, compound concepts look-up, noise removal and scrubbing of unstructured text implementing bag-of-words model of text analytics.

### **Currency Converter Android App (CMU) — Android, Java Servlets, Heroku**

Developed a currency converter Android app which leverages custom concurrent currency conversion RESTful APIs deployed to public cloud on Heroku to service currency conversion requests.

## **EDUCATION**



### **Carnegie Mellon University (CMU), Pittsburgh, USA**

*Master of Information Systems Management - GPA 3.73 / 4.33*

AUG 2015 - DEC 2016



### **Jabalpur Engineering College (JEC), Jabalpur, India**

*Bachelor of Computer Science and Engineering - GPA 3.9 / 4.0 (Graduated with Distinction)*

AUG 2009 - APR 2013