

## Tarun Choudhary

Email: [tarunonmail@gmail.com](mailto:tarunonmail@gmail.com)

Phone: +1-646-506-4077, [www.linkedin.com/in/tarunchoudhary7/](http://www.linkedin.com/in/tarunchoudhary7/)

Solutions Architect with over 7 years of experience architecting, designing and deploying enterprise solutions and infrastructure. Experience with designing data-driven decision-making workflows. Strongly believes in automation, monitoring and alerting. The key is to be proactive and not reactive wherever possible.

### Technical Familiarity:

**Programming/Scripting Languages/Frameworks:** Python, PowerShell, REST, Chrome/Firefox browser extensions, Selenium and FFmpeg Framework.

**Infrastructure:** Kubernetes, Linux Containers (LXC/LXD), Windows Servers, Google Cloud Compute, S3 Buckets, Google Cloud Big Query, Google Cloud Workspace, Google Chrome Policy management, Office 365 Collaboration/Productivity Suite, OKTA, Ansible and Jenkins.

**Network Protocols/Tools:** VoIP, TCP IP, DHCP, DNS, UDP, NAT, QOS, RTP, HLS, RTSP/RTMP, H.264, H.323, SIP, TLS.

**Collaboration Solutions:** Live Streaming Solutions, Video-on-Demand (VOD) Platforms, Google Meet, Microsoft Teams, Asterisk PBX, Survivable Branch Appliances (SBA/SBCs), Polls/Q&A Platforms, Room Scheduling Systems and Digital Signage Platforms.

### WORK EXPERIENCE:

#### Two Sigma Investments, LP.

[Feb 2015-Present]

#### ➤ Senior Solutions Architect, Enterprise/UC Engineering

[Jan 2017-Present]

- Design, architect and implement cloud-based and on-prem high availability enterprise solutions including Crowdsourcing Platform (Slido/Polls-Everywhere), Livestream platforms (VBrick, Google), Endpoint monitoring/provisioning platform (UDM), Custom integrations, Google Meet, Google Livestream, Skype for Business and MSFT Teams.
- Tech-Lead and manage global enterprise operation teams across US, UK and Asia, supporting enterprise infrastructure.
- Architect and implement enterprise infrastructure contributing towards Two Sigma London, Hong-Kong, Shanghai, Tokyo and NYC office buildouts.
- Participate in market landscape research initiatives for new platform roll outs. Develop and scope RFIs/RFPs for the leading vendors.
- Introduce automated workflows for provisioning, maintaining, monitoring and alerting for managed infrastructure using Python and APIs alongside with tools such as SCOM, Splunk and Nagios.
- Develop custom infrastructure testing tools using Python and Selenium framework.
- Build pipelines for data collection and health services to develop KPIs and KHIs interfacing with REST APIs, S3, Big Query and SQL databases.
- Drive tech debt reduction efforts for the team by migrating scripts/tools off dedicated on-prem resource to public cloud such as Kubernetes (K8s) platform and dedicated cloud hosts.

#### ➤ Systems Engineer/Solution Architect, UC Engineering

[Feb 2015- Dec 2016]

- Designed and deployed a new standardized conference room design globally improving the time to join a call by 80%.
- Migrated the conference rooms from H.323 standards-based 4CIF video calls to SIP-based HD video calling.
- Administration and maintenance of telephony/VC applications on Asterisk, Lync and Skype for Business servers.
- Conducted root cause analysis using tools such as tcpdump, Fiddler, Wireshark and Netmon.
- Addressed daily KTLO issues.

### Relevant Projects

#### ➤ Migration of Collaboration Solutions to Cloud

- Participated in the *Collaboration and Productivity Ecosystem research working group* to conduct a market landscape research and put together a plan for the future of collaboration solutions at Two Sigma. Participated in migration of messaging applications to Slack. Lead the video conferencing platform migration to Google Meet.
- Spearheaded the migration of video conferencing application to Google Meet platform. Implemented *custom proxy and browser-side controls* using a *chrome browser extension* to prevent data exfiltration and meet compliance archiving requirements.
- Partnered with Google Meet product team to *influence and deliver on platform enhancements and roadmap*.

- Lead the design of in-house developed meetings page to show Skype, Meet and Teams meetings on a single portal to simplify user meeting join experience.
- **Google Livestream**
  - To accommodate the overnight transition to WFH after Covid-19 pandemic, delivered **cloud based livestreaming platform** (Google Livestream) on an accelerated 3-week timeline to enable company-wide all-remote livestreams.
  - Developed a **selenium framework-based stress test tool** using **Python** to simulate a company-wide automated event test and collect infrastructure utilization metrics. These metrics helped us reach a data driven decision if our infrastructure required scaling to support these bandwidth intensive livestreams.
  - Built data pipelines using **Google Big Query and Python** to enable users run event participant reports.
- **Cloud-Based Q&A/Polls Crowdsourcing Platform (Slido)**
  - Implement cloud based crowdsourcing platform used to participate in company event virtual Q&As and Polls. Scope included SCIM-based user provisioning and setting up OKTA based IDP/SSO.
  - Designed and implemented a data pipeline to import all the event data to our compliance archives.
- **Migration of Skype for Business (On-Prem) to Microsoft Teams**
  - Leading the roll out of Microsoft Teams to ~2000 users and MTR hardware to ~210 conference rooms globally.
  - Developed migration plans for video conferencing, telephony from Skype for Business to Microsoft Teams.
  - Implemented conference room system connectivity to Skype, Google Meet and Teams VC system using Poly Visual+/Visual-Pro hybrid SIP registration and Pexip cloud services during migration.
  - Conducted market landscape research for conference room Teams systems with the goal to optimize the hybrid workplace experience using AI based camera framing and active speaker tracking technologies.
- **Integrated Check-In System for conference rooms**
  - Developed a **Python based smart check-ins app** to capture room utilization data by integrating the conference room tech with the rooms scheduling system.
  - Developed **Python based web request listener** to listen for a xml-based requests, locate the room id and meeting against them to check-into the meeting. This automation enhanced the room utilization data being captured.
  - Pushed **logs to Splunk using Python log handlers(rfc5424sysloghandler)** and produced daily, weekly and monthly check-in reports.
- **Livestream and Video-on Demand Platform (VBrick Rev On-Prem)**
  - Migrated home-grown livestreaming platform to an off-the-shelf livestreaming platform. Automated the livestream workflow to cut down the set-up time from 30 mins to 5 mins.
  - Deployed a video-on-demand feature as part of the same platform. Migrated all the video content using a tool developed in Python from DFS drives and wikis to this new platform using REST APIs.
  - Implemented custom integrations with other platforms such as Slack, Search/Indexing platforms (Coveo) and Cornerstone LMS (Learning Management Systems) platform
- **Asterisk PBX to Skype for Business 2015 Migration**
  - Migrated ~1200 user off legacy PBX system to Skype for Business 2015 for telephony and video conferencing.
  - Worked with AudioCodes SBCs/SBAs and recording appliances to provide the Skype PSTN and associated services.
- **Conference Room Standardization/Technology Overhaul**
  - Standardized all Two Sigma conference rooms to provide a consistent user experience globally.
  - Upgraded legacy Polycom HDX systems to Group Series devices providing HD video conference meetings.
  - Implemented automated workflows for maintenance of hardware in conference room using bash scripts and SSH based Poly APIs implemented using expect python-based library.

### **D3 Unified Communications (D3UC), Network Engineer**

**[Mar 2014- Jan 2015]**

- Gained knowledge of VOIP, SIP, H.323, TCP/IP, LAN architectures (e.g., Ethernet, Fast Ethernet, GIG Ethernet), WAN technologies and Routing protocols.
- Worked on an auto endpoint provisioning tool using DHCP and SFTP configuration push workflow.
- Configuration, management and troubleshooting of Cisco Catalyst 2800 Switches, Cisco Catalyst 4500 Series switches and Firewalls.

### **EDUCATIONAL QUALIFICATIONS:**

**Master of Science** Computer Networks, Electrical Engineering  
New Jersey Institute of Technology, NJ, USA

**[Aug 2013 -Dec 2014]**

**Bachelor of Technology**, Electronics and Communication Engineering  
Gautam Buddha University, India

**[Aug 2009 -May 2013]**