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Max Roby
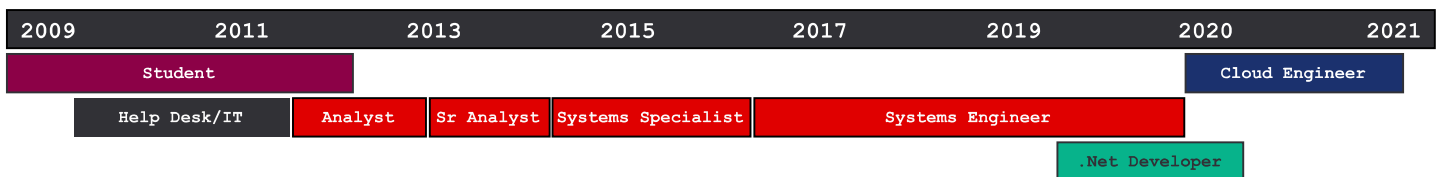## – Senior Systems Engineer –

I'm a Senior Engineer and Developer with 10+ years experience across multiple segments of the tech industry. I specialize in Automation, Infrastructure, and Gamification with GCP/AWS, C#/Python, Ansible/Terraform, Unity3D and many other tools. Let's talk about Infrastructure as Code, intersectionality in systems design, dual-power structures, and leaving things better than we found them.

skills

Amazon Web Services	Google Cloud Platform	Languages & Platforms	Tools
EC2, S3, DynnamoDB, VPC/Networking, IAM, AWS CLI	Compute, App Engine, Storage, Cloud SQL, GKE, StackDriver, IAM, GCR, gsutil, gcloud, Api	C#, Bash, Python, Powershell, JS, Java, SQL ------------------ Linux, Windows, .Net, Unity 3D, Android	Docker, Vagrant, Ansible, Terraform, Git, SVN, Clonezilla, Kubernetes, Jenkins, ADO, ADB, Android Studio

timeline

2009	2011	2013	2015	2017	2019	2020	2021

- Student
- Cloud Engineer
- Help Desk/IT
- Analyst
- Sr Analyst
- Systems Specialist
- Systems Engineer
- .Net Developer

work_history

Cloud Platform Engineer - STRIVR

Nov 2019 - Current

Created:

- **Automation Scripts** (Bash, Powershell, Ansible, C#, SQL, Python) **which enabled content delivery** (Unity3D, Android) **process from multiple teams' cloud locations** (ADO Artifacts, GCP:Storage, CloudSQL, Compute) **to VR HMDs** (Oculus, Pico) **and reduced time to deploy by over 50%.**

- **Zoom video-background generator** (Unity 3D 2019.4, C#, SRP/Real-Time GI) **allowing employees to create their own highly customized virtual office environment** (lighting, camera settings, Post Processing effects, physics objects) **as a zoom video background while working remote during Covid-19.**

- **Custom live linux distro** (Ubuntu, Pinguy, CasperFS) **and automated update, test, and build process** (Ansible, Bash, Terraform, GCP compute/storage, SQL, Javascript, HTML, CSS) **to perform data rescue, troubleshooting, refurbishing, redeployment and documentation of RMAd hardware.**

- **Expanded and maintained company IaC + automation** (Powershell, Bash, Ansible, Terraform) **for creating and managing GCP Compute resources, VR HMDs** (Oculus, Pico), **and remote physical hardware** (Linux, Android).

- **Logging scripts** (Python, Bash) **for dashboards/alerting** (Stackdriver, Compute, Storage, Ansible, Bash, Slack) **for cloud resources.**

Cloud Platform Engineer - STRIVR

- **Hardware**(4000+ devices) **security vulnerability scanning** (Tennable, Nessus) **and OS**(Ubuntu) **upgrade/patch management** (Ansible)

- **Manufacturer**(Polywell) **base OS image**(Ubuntu) **creation and maintenance for multiple device models.**

- **Assisted in troubleshooting and diagnostics of OS**(Linux, Android), **software**(.Net, C#, Unity) **and network issues in conjunction with internal and external Help-Desks.**

.Net Developer - Political Campaign

August 2019 - March 2020

- **Designed and built community management discord bot**(C#, .Net Core, Discord.Net, AWS EC2, S3, IAM, SQL) **to gamify online-social interactions with users**(10k+) **and provide several tools/features not available in other management bots, such as:**

  User state, preferences, and role persistence(SQL, Wix, Google Sheets API)
  Moderation team time tracking (C#, SQL)
  Gamified content engagement tools(C#, Unity3D, SQL)
  Custom role-based automation(C#, SQL)
  Quarantine zones/roles(Discord.Net, C#)
  Community organization/outreach functions(C#, Discord.Net, Google Sheets API, SQL, MailGun)

Pizza Hut (Multiple Roles)

Sept 2011 - Nov 2019

Systems Engineer - Pizza Hut Connect (2016-2019)

Created:

- **Compatibility patches and scripts** (Linux, bash, xorg, xinput, grub, udev, rc.local) **and certified functionality of all new hardware** (Point-of-Sale devices, Terminals, Peripherals, Tablets, Signage, Servers) **entering Pizza Hut ecosystem on proprietary Linux**(Debian) **distributions which reduced the cost of entry for new franchisees and extended the life of hardware resulting in $10,000,000+ of negated replacement costs during my tenure.**

- **Internal mobile app** (Android, Android Studio, Java) **to interact with proprietary management software**(Java, Linux, Bash) **over PCI compliant wireless APs** (SonicWall) **used by 1000+ management employees.**

- **Interactive, dynamically-generated network and hardware visualization program** (Unity 3D, Bash, Python, SQL, Ubuntu) **called "Virtual Agent" which mapped, monitored, and diagnosed issues with store networks and hardware**(Linux, Windows) **identified as biggest call-drivers for the help-desk and interfaced with ticketing systems**(BMC Remedy). **Users received visual step-by-step instructions on how to resolve many common hardware and network issues without the need to contact an agent.**

- **Custom Windows image creation** (Windows 7/8/10, registry, powershell) **optimized for low-spec devices and PCI compliance.**

- **Updated and maintained virtual-machines**(VMware, vagrant, Ubuntu, Windows) **which provided emulation of full point-of-sale systems for training.**

- **Guided decisions on hardware purchasing, Road-map development, vendor relations and communications as primary pint-of-contact for manufacturers and partners**(Dell, Wyse, VXL, Samsung, Zotac, HP, ParTech, NCR, Partner, Posiflex, Wincor/Nixdorf)**on hardware-level issues** (Bios, hardware revisions, drivers)

- **MDM**(Samsung, tizen) **deployment, integration, testing**

Systems Specialist - Pizza Hut of North America (2014-2016)

- **Led OS migration hardware compatibility testing process**(Xorg, Xinput, grub, drivers) **and certification** (SuSE to Ubuntu) **of point-of-sale hardware and peripherals** (servers, terminals, touchscreens, signage)

- **Responsible for OS(Linux,Windows)image alteration and deployment**(PXE, Clonezilla, Acronis)

- **Performed system component**(CPU, RAM, HDD, SSD) **performance benchmarking**(Linux, Bash, SQL) **and guided hardware purchasing decisions.**

- **Created brand-standards enforcement and hardware life-cycle management reporting tool**(JavaScript, HTML, CSS, Python)

Sr. Restaurant Information Systems Analyst - Pizza Hut Inc. (2013-2014)

- **Created new system of Help-Desk analyst KPIs and metrics**(SQL,Cisco Agent,BMC Remedy,Excel) **which vastly improved clarity of employee performance and reporting granularity.**

- **Designed and built gamified leaderboard**(Unity3D, C#, SQL, Cisco Agent, BMC Remedy) **and training materials to supplement KPIs and metrics.**

- **Authored fully-automated and computer-assisted troubleshooting tools**(Linux,Java,Bash) **for Help-Desk employees to resolve non-technical, call-driving issues identified by leadership as resource intensive**(Payroll, Inventory, Reporting, Ideal-usage, Labor)

- **Mentored and trained L1 Help-Desk employees on Pizza Hut software/hardware stack**(Linux, proprietary software(Java, SQL, bash), point-of-sale hardware, servers, and network equipment)

- **Monitored**(Solarwinds)**, troubleshot, and resolved network issues with external help desks and vendors.**

Systems Analyst - Pizza Hut Inc. (2011-2013)

- **Remote support for in-store point-of-sale hardware**(terminals, AIO devices, printers, cash registers, switches, routers) **software**(Java, Linux, SQL, Windows) **and processes**(payroll, inventory, cash management, training, scheduling)

Independent

- **Skyrim lighting mod**(ENB, Nexusmods)**which increased the visual fidelity of the game experience. Resolved bug in default eye-adaptation post-processing effects**(OpenGL, C#) **with AMD crossfire graphics cards.**

- **Skyrim free-camera mod**(Papyrus) **to allow manual camera DoF, lighting/ToD, and smoother movement for video/photo capture of gameplay.**

- **World of Warcraft mod**(Lua, WeakAuras) **which would allow players to live out their Initial-D drifting dreams by playing eurobeat music and displaying animated speedlines in the UI whenever a speed-boost was detected as active on the player.**

- **Volumetric reverb and sound occlusions system**(Unity3D, C#) **based on a talk by David Sirland of Dice and methods used in Battlefield 3 to create realistic positional audio. System captures data about surrounding geometry and sound sources to determine the appropriate level and type of reverb to use as well as realistically occludes sounds based on line of sight, distance, and position.**

- **Spline-based particle animation system**(C#, Unity3D) **based on multiple GDC talks which combines a guided-generation spline system, scriptableobjects, and animation curve data to rapidly create and iterate on game assets while specifically paying attention to proper use of animation principles**(squash, anticipation, timing etc...).

- **Input wrapper**(C#, Unity3D, DirectInput) **which allowed keyboard/game pad control schemes to be altered, created, saved by users at runtime in Unity3D. Provided enhancements such as: device agnostic syntax, per-axis sensitivity and dead-zone configuration, rumble support, ability to track active/inactive inputs, duration of inputs, and combinations/order of concurrent of inputs.**