

Venkata Kartik Pidatala

kartikpvn3124@gmail.com | +1(650)-799-3815 | <https://www.linkedin.com/in/kartik-pidatala/> | Seattle, WA (Willing to relocate)
Analytical, result driven Software Engineer with 8 YOE of successfully pushing projects to completion

EDUCATION

Master of Science, Electrical Engineering, University of Southern California, Los Angeles	Dec 2018
Course Work: Internet and Cloud Computing, Operating Systems, Computer Networks, Probability and Statistics	
Bachelor of Science, Electrical Engineering, Thapar University, Patiala, India	July 2016
Course Work: Computer programming, Embedded systems, Computer Architecture.	

CORE SKILLS

Responsibilities	Collaboration, Performance Review, Design, Deployment
Programming Languages	BASH, BAT, C, C++, Go, Java, Python, PowerShell
Cloud Technologies	Azure Networking, EBPF, Graphana, Kubernetes, Prometheus
Tools	GDB, GRPC, Jenkins, Jira, EXCEL, REST API, WinDbg
Protocols	Ethernet, IP, TCP, UDP, OSPF, VPN, DNS, CDN, NAT, HTTP/1.0/1.1/2
Databases	SQL, Postgres, Mongo DB, Kusto Query Language (KQL)
Operating Systems	Linux, Windows

EXPERIENCE

Software Engineer 2, Microsoft, Redmond	May 2022 - Present
Windows Server Container Networking – Go, C++	
<ul style="list-style-type: none">Led the scale performance benchmarking effort for Windows Container Networking agent control\data path testing.Steered Data Path Observability through Retina using Cilium (Ported to Windows) working with 3 teams to completion.Contributed to EBPF-for-windows project	
Platform Independent Data Collection (Proof of Concept) - C	
<ul style="list-style-type: none">Investigated the viability of Extended Berkeley Filter (eBPF) technology to offer driverless experience with Dependency Agent (DA).Presented a basic POF model with features powered by EBPF highlighting advantages, key challenges, and possible support in future.	
Enhancing Customer Experience	
<ul style="list-style-type: none">Drove the effort to qualify customer experiences provided by support engineers (team size: 6).Worked with Program Managers to gather metrics for product use cases to help make business decisions.	
Dependency Agent Release - KQL	
<ul style="list-style-type: none">Led the DA deployment effort across 20 regions 2 times with stage-wise verification following SDP.Evaluated the stage wise performance of Install/Update success rates.Identifying and documenting new issues, regressions, and worthiness to progress further.	
VM-Insights PowerShell Onboarding Experience – PowerShell	
<ul style="list-style-type: none">Wrote VMI manual onboarding solution for Virtual Machines at scale.Wrote VMI Data Collection Rule Generator PowerShell Module to create to assist Customers in LA-AMA migration.	
Azure Monitor Migration Data Duplication – C++/BASH/Python	
<ul style="list-style-type: none">Individually solved identified and solved the data duplication with the Dependency Agent in a migration scenario in Linux causing 2*cost to Customers of VMI.Verified issue closure under various test case scenarios.	
Software Engineer 2, Cisco Systems Inc, San Jose, CA	Feb 2019 – May 2022
In Service Software Upgrade – C	
<ul style="list-style-type: none">Added support for non-disruptive software upgrade to achieve high availability.Created wrapper APIs to read/write state of 12 global data structures into Persistent storage.Identified events of state change to save current context and read from it after upgrade to avoid downtime.	
GRPC CLI's – Python/C	
<ul style="list-style-type: none">Developed 8 command line interfaces end-to-end over GRPC framework to fetch user-requested data.Also wrote backend drivers calls to read/write data into the cache and the registers.	
Software Engineer Intern, Versa Networks, San Jose, CA	Aug 2018 – Dec 2018
Automation Test Framework – Python	
<ul style="list-style-type: none">Created automation test framework for VoIP feature Versa application-level gateway.Wrote test cases for to test Carrier Grade NAT, firewall, routing and SIP functionality of the application-level gateway.	
Software Engineering Intern, Juniper Networks, Sunnyvale – C++	May 2018 - Aug, 2018
<ul style="list-style-type: none">Worked on a standalone project in C++ to establish pub-sub-IPC model for PTP component.Assisted in component migration to the new IPC mechanism by writing read/write APIs for 10 data structures.	

ACADEMIC PROJECTS

Weenix Operating System – C

- Implemented drivers, virtual memory, virtual file system (VFS), system calls, and file operations.
- Built basic building blocks of Weenix OS: threads, processes, and synchronization primitives.

Token Bucket Emulation – C

- Modeled a traffic shaping system for transmission of packets in a controlled manner.
- Applied multi-threading within a single process using mutex and condition variables in the pthread library.