Amogh Madanayakanahalli Kumar

✉ : amoghmku@gmail.com 📞 : +1 (831) 266-5534 📍 : Santa Cruz, CA 95060 🔗 : linkedin.com/in/amoghmk

EDUCATION

- **University of California, Santa Cruz** (Current)
  - Master of Science in Computer Science and Engineering (GPA: 4 / 4)   *(Sep 2022 - Mar 2024 (Expected))*
- **PES University, Bengaluru, India**
  - Bachelor of Technology in Electronics and Communication Engineering (GPA: 9.37 / 10)   *(Aug 2015 - May 2019)*
  - Minors in Computer Science and Engineering (GPA: 9.6 / 10)   *(Aug 2016 - May 2018)*

Relevant Coursework and Self-study: Computer Networks, Operating Systems, Computer Architecture, Compiler Design, Data Structures and Algorithms, Distributed and Parallel Computing.

TECHNICAL SKILLS

- **Programming Languages :** C, Python, Java, Perl, Golang, C++, JavaScript, Shell Script
- **Database Management Systems :** MongoDB, MySQL, SQLite, PostgreSQL
- **Web Development :** Node.js, AngularJs, Vue.js, React, HTML, CSS, JQuery, Nginx
- **Tools/Frameworks :** Git, Docker, Flask, REST APIs, GraphQL, Visual Studio Code, Wireshark
- **Others :** Full Stack Development, Object Oriented Programming, Debugging, Multi-threading, Socket Programming, Packet Tracing and Analysis, System Kernel Programming, Virtualization, AWS, Azure, Agile Methodologies

WORK EXPERIENCE   *(3+ years)*

- **Nutanix, San Jose, CA**
  - **Software Defined Network Engineering Intern**   *(Jun 2023 - Sep 2023)*
    * Enhanced intra-PC layer2 connectivity between subnets with OVN's L2gateway port, replacing the VXLAN tunneling approach. This streamlined configuration and setup, reduced resources required, boosted throughput by 1000%, and cut latency to 1/4th, significantly improving migration scalability.
- **Citrix R&D, Bengaluru, India**
  - **Software Development Engineer - Level 2**   *(Mar 2021 - Sep 2022)*
    * Developed a feature to monitor health of internet links and consequently backhaul critical application traffic via stable MPLS links instead of direct breakout to internet upon detection of significant degradation (default of 1s latency or 10% loss).
    * Devised an infrastructure to automatically push SaaS application signatures for traffic classification onto Citrix SD-WAN (Software-Defined Wide Area Network) appliances from Citrix SD-WAN Orchestrator service on cloud. This enabled updating of the signatures on the appliances within 24 hours in opposition to requiring a new release.
    * Research on integration of Citrix SD-WAN with Citrix ITM (Intelligent Traffic Management) for intelligent wan-link path selection for optimal delivery of internet-bound SaaS application traffic.
    * Live environment analysis, debugging and resolution of 20+ critical customer issues.
  - **Software Development Engineer - Level 1**   *(Jul 2019 - Feb 2021)*
    * Classification and Optimization of Citrix Managed Desktops traffic and Web proxy traffic passing via Citrix Gateway Service.
    * Added enhancement of IPv6 support for DNS parsing and proxying features as well as first packet classification in Citrix SD-WAN for routing of Office365 and other SaaS application traffic.
    * Lead a team of 4 to design and develop an infrastructure to create on-demand Citrix SD-WAN networks in private cloud (OpenStack) and configure the same via SD-WAN Orchestrator on the basis of a digitally visualized network topology.
  - **Software Engineering Intern**   *(Jan 2019 - Jun 2019)*
    * Designed and created Behavioral Driven Development (BDD) validation framework for Citrix SD-WAN Orchestrator. The framework provided a solid base for the product's Automation and helped to offload the majority of the manual testing.

PATENT

- **US 17/841,135** - An optimal way to store multiple copies of files in local PoPs.   *(Filed - Jun 15, 2022)*

ACADEMIC PROJECTS

- **UCSC ELVES Lab:** Explored Pastry and Scribe in distributed systems to strategically partition computations, distribute tasks across nodes and aggregate the results to achieve an efficient and cost-effective processing for GNNs (Graph Neural Networks).
- Researched and proposed secure biometric data storage via Blockchain for distributed registration and access systems. Implemented a Kerberos authentication proof of concept for validating transactions and data retrieval from ledgers at access points.

PROFESSIONAL DEVELOPMENT CERTIFICATIONS

- AWS Partner: AWS Cloud Practitioner Essentials.   *(Aug 2022)*
- Citrix certified security track - Level 5 - Purple Belt in "Secure Cloud Development".   *(Mar 2019 - Aug 2021)*
- Citrix Learning Center course on "Docker with Kubernetes".   *(Dec 2019)*
- Coursera certified course on "Machine Learning" offered by Stanford University.   *(Jun 2017 - Aug 2017)*

UNIVERSITY OF CALIFORNIA
SANTA CRUZ

*** U N O F F I C I A L ***

Name: **Madanayakanahalli Kumar, Amogh**
Student ID: **2005781**

Institution Info: University of California, Santa Cruz
1156 High Street
Santa Cruz, CA 95064

Beginning of Graduate Record

2022 Fall Quarter

Program: Computer Science & Engineer
Plan: MS in Computer Science and Engineering

Course		Description	Attempted	Earned	Grade	Points
CSE	200	Research & Teaching	3.00	3.00	S	0.000
CSE	201	Analysis Algorithms	5.00	5.00	A	20.000
CSE	250A	Computer Networks	5.00	5.00	A	20.000
LAAD	210	OralCommunication:TAs	2.00	2.00	S	0.000

Academic Standing Effective 12/14/2022: Good Standing

			Attempted	Earned	GPA Units	Points
Term GPA	0.00	Term Totals	15.00	15.00	10.00	40.000
Transfer Term GPA		Transfer Totals	0.00	0.00	0.00	0.000
Combined GPA	0.00	Comb Totals	15.00	15.00	10.00	40.000
Cum GPA	0.00	Cum Totals	15.00	15.00	10.00	40.000
Transfer Cum GPA		Transfer Totals	0.00	0.00	0.00	0.000
Combined Cum GPA	0.00	Comb Totals	15.00	15.00	10.00	40.000

2023 Winter Quarter

Program: Computer Science & Engineer
Plan: MS in Computer Science and Engineering

Course		Description	Attempted	Earned	Grade	Points
CSE	120	Computer Architect	5.00	5.00	A	20.000
CSE	240	Artif Intelligence	5.00	5.00	A+	20.000

Academic Standing Effective 03/29/2023: Good Standing

			Attempted	Earned	GPA Units	Points
Term GPA	0.00	Term Totals	10.00	10.00	10.00	40.000
Transfer Term GPA		Transfer Totals	0.00	0.00	0.00	0.000
Combined GPA	0.00	Comb Totals	10.00	10.00	10.00	40.000
Cum GPA	0.00	Cum Totals	25.00	25.00	20.00	80.000
Transfer Cum GPA		Transfer Totals	0.00	0.00	0.00	0.000
Combined Cum GPA	0.00	Comb Totals	25.00	25.00	20.00	80.000

2023 Spring Quarter

Program: Computer Science & Engineer
Plan: MS in Computer Science and Engineering

Course		Description	Attempted	Earned	Grade	Points
CSE	206C	Found Modern Cryptog	5.00	5.00	A	20.000
CSE	210A	Programming Languag	5.00	5.00	A+	20.000

Academic Standing Effective 06/20/2023: Good Standing

			Attempted	Earned	GPA Units	Points
Term GPA	4.00	Term Totals	10.00	10.00	10.00	40.000
Transfer Term GPA		Transfer Totals	0.00	0.00	0.00	0.000
Combined GPA	4.00	Comb Totals	10.00	10.00	10.00	40.000
Cum GPA	4.00	Cum Totals	35.00	35.00	30.00	120.000
Transfer Cum GPA		Transfer Totals	0.00	0.00	0.00	0.000
Combined Cum GPA	4.00	Comb Totals	35.00	35.00	30.00	120.000

UNIVERSITY OF CALIFORNIA SANTA CRUZ

*** U N O F F I C I A L ***

Name: **Madanayakanahalli Kumar, Amogh**
Student ID: **2005781**

2023 Summer Quarter

Program: Computer Science & Engineer
Plan: MS in Computer Science and Engineering

Course		Description	Attempted	Earned	Grade	Points
CSE	297F	Ind Study/Research	2.00	2.00	S	0.000

Academic Standing Effective 09/20/2023: Good Standing

			Attempted	Earned	GPA Units	Points
Term GPA	0.00	Term Totals	2.00	2.00	0.00	0.000
Transfer Term GPA		Transfer Totals	0.00	0.00	0.00	0.000
Combined GPA	0.00	Comb Totals	2.00	2.00	0.00	0.000
Cum GPA	4.00	Cum Totals	37.00	37.00	30.00	120.000
Transfer Cum GPA		Transfer Totals	0.00	0.00	0.00	0.000
Combined Cum GPA	4.00	Comb Totals	37.00	37.00	30.00	120.000

2023 Fall Quarter

Program: Computer Science & Engineer
Plan: MS in Computer Science and Engineering

Course		Description	Attempted	Earned	Grade	Points
CSE	211	Compiler Design	5.00	5.00	A+	20.000
STAT	203	Intro Prob Theory	5.00	5.00	A	20.000

Academic Standing Effective 12/16/2023: Good Standing

			Attempted	Earned	GPA Units	Points
Term GPA	4.00	Term Totals	10.00	10.00	10.00	40.000
Transfer Term GPA		Transfer Totals	0.00	0.00	0.00	0.000
Combined GPA	4.00	Comb Totals	10.00	10.00	10.00	40.000
Cum GPA	4.00	Cum Totals	47.00	47.00	40.00	160.000
Transfer Cum GPA		Transfer Totals	0.00	0.00	0.00	0.000
Combined Cum GPA	4.00	Comb Totals	47.00	47.00	40.00	160.000

Graduate Career Totals

			Attempted	Earned	GPA Units	Points
Cum GPA:	4.00	Cum Totals	47.00	47.00	40.00	160.000
Transfer Cum GPA		Transfer Totals	0.00	0.00	0.00	0.000
Combined Cum GPA	4.00	Comb Totals	47.00	47.00	40.00	160.000

End of *** U N O F F I C I A L ***

PES UNIVERSITY

(Established under Karnataka Act No.16 of 2013)

100 Feet Ring Road, BSK III Stage, Bangalore-560085

TRANSCRIPT

Name	AMOGH M K	Duration of the Program	4 Years
SRN	01FB15EEC027	Medium of Instruction	English
Transcript Number	UT/2015/ECE/0027	Date of Issue	August 27, 2021
Year of Admission	2015	Year of Completion	May 2019
Program of Study	B.Tech. - Electronics and Communication Engineering		

Sl. No	Course Code	Course Title	Credits	Grade	Month & Year of Completion	Sl. No	Course Code	Course Title	Credits	Grade	Month & Year of Completion
1	UE15CS101	Introduction to Computing Using Python	4	S	Dec 2015	38	UE15EC304	Communication Engineering Laboratory	1	S	Dec 2017
2	UE15CS102	Introduction to Computing Using Python Laboratory	1	S	Dec 2015	39	UE15EC305	Digital Signal Processing Laboratory	1	S	Dec 2017
3	UE15EE101	Basic Electrical Engineering	4	S	Dec 2015	40	UE15EC306	VLSI Design Laboratory	1	S	Dec 2017
4	UE15HS102	Environmental Studies	-	AP	Dec 2015	41	UE15EC316	Pattern Recognition and Classification	4	A	Dec 2017
5	UE15MA101	Engineering Mathematics - I	4	A	Dec 2015	42	UE15EC326	Artificial Neural Networks	4	A	Dec 2017
6	UE15ME104	Mechanical Engineering Sciences	4	A	Dec 2015	43	UE15EC336	Digital Image Processing	4	A	May 2018
7	UE15ME106	Computer Aided Engineering Graphics	2	A	Dec 2015	44	UE15EC341	Network Security	4	S	May 2018
8	UE15PH101	Engineering Physics	4	S	Dec 2015	45	UE15EC351	Computer Networks	4	S	May 2018
9	UE15PH102	Physics Laboratory	1	A	Dec 2015	46	UE15EC352	Microwave Engineering	4	B	May 2018
10	UE15CS151	Problem Solving with C	4	A	May 2016	47	UE15EC353	Digital System Design using HDL	4	S	May 2018
11	UE15CS152	Problem Solving with C Laboratory	1	S	May 2016	48	UE15EC354	Computer Networks Laboratory	1	S	May 2018
12	UE15CV101	Engineering Mechanics	4	S	May 2016	49	UE15EC355	Microwave Engineering Laboratory	1	S	May 2018
13	UE15CY101	Engineering Chemistry	4	A	May 2016	50	UE15EC356	Digital System Design using HDL Laboratory	1	S	May 2018
14	UE15CY102	Chemistry Laboratory	1	A	May 2016	51	UE15EC401	Fundamentals of Antenna	4	A	Dec 2018
15	UE15EC101	Basic Electronics Engineering	4	S	May 2016	52	UE15EC402	Embedded Systems Design	4	A	Dec 2018
16	UE15HS101	Constitution of India and Professional Ethics	-	AP	May 2016	53	UE15EC403	Wireless Communication	4	A	Dec 2018
17	UE15JE101	Unified Engineering (JEDI)	2	A	May 2016	54	UE15EC413	Network Security II	4	A	Dec 2018
18	UE15MA151	Engineering Mathematics - II	4	A	May 2016	55	UE15EC426	Speech Processing	4	S	Dec 2018
19	UE15EC201	Network Analysis & Synthesis	4	S	Dec 2016	56	UE15EC491	Industry / International Internship	6	S	May 2019
20	UE15EC202	Electronic Devices and Circuits	4	A	Dec 2016	57	UE15EC492	Project Work	8	A	May 2019
21	UE15EC203	Logic Design	4	S	Dec 2016	58	UE15IE442	Graphology	2	A	May 2019
22	UE15EC204	Electromagnetic Field & Transmission Lines	4	A	Dec 2016						
23	UE15EC205	Network Analysis and Synthesis Laboratory	1	S	Dec 2016						
24	UE15EC206	Electronic Devices and Circuits Laboratory	1	S	Dec 2016						
25	UE15EC207	Logic Design Laboratory	1	S	Dec 2016						
26	UE15MA201	Engineering Mathematics -III	4	S	Dec 2016						
27	UE15EC251	Linear Integrated Circuits	4	A	May 2017						
28	UE15EC252	Signals and Systems	4	S	May 2017						
29	UE15EC253	Microcontrollers	4	B	May 2017						
30	UE15EC254	Probability and Random Processes	4	A	May 2017						
31	UE15EC255	Linear Integrated Circuits Laboratory	1	A	May 2017						
32	UE15EC256	Signals and Systems Laboratory	1	A	May 2017						
33	UE15EC257	Microcontrollers Laboratory	1	A	May 2017						
34	UE15MA251	Linear Algebra & Its Applications	4	S	May 2017						
35	UE15EC301	Communication Engineering	4	B	Dec 2017						
36	UE15EC302	Digital Signal Processing	4	S	Dec 2017						
37	UE15EC303	VLSI Design	4	B	Dec 2017						

Credits	176	CGPA	9.37

Grade : S - 10 (Outstanding), A - 9 (Excellent), B - 8 (Very Good), C - 7 (Good), D - 6 (Fair), E - 5 (Satisfactory), AP - Audit Pass
Class : >= 9.50 - First Class With Honors, >= 7.75 & 9.50 - First Class With Distinction, >= 6.75 & 7.75 - First Class, >= 5.75 & 6.75 - Second Class, >= 5.0 & 5.75 - Pass Class

VERIFIED BY

CONTROLLER OF EXAMINATIONS
Controller of Examinations
PES University
100 Feet Ring Road, BSK III Stage
Bangalore – 560 085

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(Established under Karnataka Act No. 16 of 2013)
100 Feet Ring Road, BSK III Stage, Bengaluru - 560 085

CERTIFICATE FOR MINOR COURSE

It is certified that AMOGH M K bearing SRN: 01FB15EEC027 has fulfilled the requirement of **Minors in Computer Science and Engineering** by successfully passing the courses listed below:

Sl. No	Course Code	Course Tile	Credits	Grade Awarded	Month & Year of Completion
1	UE14CS160	Data Structures	4	S	Dec 2016
2	UE14CS162	Data Structures Laboratory	1	S	Dec 2016
3	UE14CS180	DataBase Management Systems	4	A	May 2017
4	UE14CS182	Data Base Management Systems Laboratory	1	S	May 2017
5	UE14CS240	Introduction to Operating Systems	4	A	Dec 2017
6	UE14CS242	Introduction to Operating Systems Laboratory	1	S	Dec 2017
7	UE14CS280	Design and Analysis of Algorithms	4	S	May 2018
8	UE14CS282	Design and Analysis of Algorithms Laboratory	1	S	May 2018

This certificate is issued under the seal and signature of the undersigned.

Date : August 31,2019
Place: Bengaluru

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_____
Controller of Examinations

Controller of Examinations
PES University
100 Feet Ring Road, BSK III Stage
Bangalore-560 085

GRADE POINT SCALE

MEDIUM OF INSTRUCTION IS ENGLISH

Letter Grade	Grade Point
'S'	10
'A'	09
'B'	08
'C'	07
'D'	06
'E'	05
'F'	00
'A P'	Audit Pass
'A F'	Audit Fail
'W'	Withdraw

SGPA = Σ (Course Credits X Grade Points) / Σ Course Credit for all courses with letter grades including "F" in current semester

CGPA = Σ (Course Credits X Grade Points) / Σ Course Credit for all courses with letter grades including "F" upto the end of current semester

PERCENTAGE EQUIVALENCE OF GRADE POINTS

CGPA	Equivalent Percentage	Class / Division
$\geq$ 5.0 - < 5.75	$\geq$ 42.5 & < 50	Pass Class
$\geq$ 5.75 - < 6.75	$\geq$ 50 & < 60	Second Class
$\geq$ 6.75 - < 7.75	$\geq$ 60 & < 70	First Class
$\geq$ 7.75 - < 9.50	$\geq$ 70 & < 87.5	First Class with Distinction
$\geq$ 9.50	$\geq$ 87.5	First Class with Honors

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