Arjun Balasubramanian

Graduate Student in Computer Sciences at the University of Wisconsin-Madison
Looking for exciting internship opportunities in Cloud Services, Big Data Platforms, and IoT
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EDUCATION

UW-MADISON
M.S. in Computer Science
Expected May 2020 | Madison, WI
CGPA: N/A

NIT TIRUCHIRAPPALLI
B.Tech in Computer Science and Engineering
July 2012 - May 2016 | Trichy, India
Department Silver Medalist
CGPA: 9.82 / 10

LINKS

LinkedIn: balarjun

COURSEWORK

GRADUATE
Big Data Systems
Introduction to Artificial Intelligence
Master's Research - Serverless Computing
(Teaching Assistant)
Introduction to Computer Networks

UNDERGRADUATE
(Relevant Work)
Operating Systems
Computer Networks
Database Management Systems
Distributed Systems
Real-Time Systems
Artificial Intelligence
Data Mining
Data Structures
Algorithms

SKILLS

PROGRAMMING
Over 5000 lines:
C • C++ • Java • Android
Over 1000 lines:
Javascipt • Shell • HTML • CSS
Python • MySQL • LaTeX
Familiar:
Apache Hadoop • Apache Spark
Scikit-Learn • CloudSim

WORK EXPERIENCE

AMAZON | Software Development Engineer, eReader Products
July 2016 – July 2018 | Chennai, India

- Worked on Amazon's first co-branded eReader device named "Kindle Migu X" for which the OS was built from scratch. Designed key modules like those for Device Registration, WeChat login, System Bars, Captive Portals, and Software Updates.
- Developed the BT and Audio Framework to support playback of Audible books on Kindle eReaders. Designed mechanisms such as the stickiness of BT states, AVRCP controls framework, and heuristics to reduce power consumption due to BT.
- Promoted to SDE-2 in April'18. Explored software mechanisms to improve the I/O performance of accesses to the disk partition which held user content like books. Prototyped two approaches - each gave a performance gain of 5%-10%.

AMAZON | Software Development Intern, Kindle Device Software
May 2015 – July 2015 | Chennai, India

- Designed a peer-to-peer communication protocol suite for Kindle eReaders based on Universal Plug and Play(UPnP). Built a Java system service that exposed an API set for device discovery and communication. Demonstrated a use-case using the service where the Family Library setup between Kindle devices could be simplified.

RESEARCH WORK AND PROJECTS

KEY MANAGEMENT SYSTEM FOR CLOUD STORAGE
Jan 2016 – May 2016 | National Institute of Technology, Tiruchirappalli
Research on comparing different Key Management approaches for distributed cloud storage systems. Defined rekeying strategies to ensure secure file replication across storage nodes joining or leaving a distributed storage cluster and prototyped it on Amazon EC2.

AUTOMATED PROBLEM SOLVER FOR EINSTEIN PUZZLE
May 2014 – July 2014 | Indian Institute of Technology, Madras
Worked under the guidance of Dr. C Pandu Rangan on building a tool that could solve logic-based problems like the Einstein puzzle. Involved building a framework capable of parsing English sentences, constructing semantic trees, and applying logic rules and heuristics to solve the puzzle.

HONORS AND SCHOLARSHIPS

2018	Awardee	Special CS Scholarship worth $6,000 at UW-Madison
2017	Winner	Kindle eReader Hackathon at Amazon India
2015	Awardee	Best Outstanding Student in B.Tech CSE at NIT Trichy

ACTIVITIES

SPIDER, R&D CLUB OF NIT TRICHY | Vice President
May 2015 – May 2016 | National Institute of Technology, Tiruchirappalli

- Developed an Android App for a magazine named "MotorIndia".

PRAGYAN, TECHNICAL FESTIVAL OF NIT TRICHY | Core Member
May 2015 – May 2016 | National Institute of Technology, Tiruchirappalli

- Prominent speakers included Dr. Peter C Schultz and Dr. Gianni Di Caro.
- Co-Founder of Pragyan Youth Business Summit 2016 - Centered around the "Make In India" initiative and included talks by Ms. Kumud Srinivasan and Mr. Amit Jain.