Ayush Bhardwaj

A.Bhardwaj-3@sms.ed.ac.uk

EDUCATION

GREEN VALLEY HIGH SCHOOL
12 GRADE ENGINEERING SCIENCE
2013-2014
Cum. Percentage: 93.8/100

IIT ROORKEE
B.Tech Electrical Engineering
2015-2019
Cum. Percentage: 85.6/100

COURSEWORK

UNDERGRADUATE
- Digital Signal Processing
- Network Theory
- Advanced Mathematics
- Fuzzy Systems
- Introduction to SDN
- Advanced Control Systems
- Microprocessors and Peripheral Devices
- Rohde and Schwarz LTE Networks
- Mathematical Methods

SKILLS

PROGRAMMING
C++ • Python • Matlab • Lua

HARDWARE PLATFORMS
USRP • IMU Sensors • ARM Processors

REFERENCE

Dr. Paul Patras
Lecturer and Chancellors Fellow
School of Informatics , UoE
ppatras@inf.ed.ac.uk

Mr. Pratap Narayan Singh
CTO and Co-Founder VerviSemi
Pratap.narayan.singh@vervesemi.com

Dr. S.P Singh
REC Chair Professor
IIT Roorkee
spseefee@iitr.ac.in

RESPONSIBILITIES

•Member Artificial Intelligence and Electronic Section , IITR
• Assitant Editor , De Grutyer Open Computer Science Journal
• Student Organizer Turing Fest 2018 (Edinburgh , UK)

EXPERIENCE

LORA WANET : A MAC PROTOCOL APPROACH | Trainee TR&D
STMicroelectronics | May 2017 – July 2017 | Mr. Pratap Narayan Singh
- Designed a MAC protocol for P2P Communication in LoRa, that exploits improved Gossip Based Discovery and FSM for deployment.
- Deployed a testbed using SX1272 to demonstrate the Mesh formation.

SERVICE CUSTOMIZATION USING OPEN CELLULAR STACK BASED LOCAL BREAKOUT | Visiting Research Postgraduate
School of Informatics , University of Edinburgh | May 2018 – Aug 2018 | Dr. Paul Patras & Dr. Francesco Gringoli , University of Brescia
- Deployed a full Cellular network OAI test bed with off the shelf cellular access dongles
- Developed a Flow Management Engine using Lua and Packet Filters that underpins the logic for different Local Breakout scenarios

BANDWIDTH AGGREGATION USING SDN | IIT ROORKEE
Jan 2018 – Present | Prof. SP Singh and Prof Pyari Mohan Pradhan
- Deploying a bandwidth aggregation scheme using Weighted Round-Robin Scheme using Openflow protocols.
- Utilized Raspberry PI3 as an OpenVSwitch for deployment.

HAPT: LOAD BALANCING IN RAN USING TEMPORAL DATA | IIT Roorkee | B.Tech Thesis
August 2018 – Present | Prof. SP Singh and Prof. P. Sateesh Kumar
- Working on Intra-LTE Handover for Load balancing using Temporal data
- Deploying a fully functional off the shelf Testbed using OAI and programmable UE simcards

PUBLICATIONS

- A.Bhardwaj,V.Singh, U.Kumawat, " EYE: Remote Monitoring Wireless System for Three-Phase Low kVA Distribution Transformer ", in Proceeding of the 2018 IEEE International Conference on Electrical, Electronics, Computers, Communication , Mechanical and Computing (EECCMC), Tamil Nadu, Jan. 2018
- Ayush Bhardwaj, AmanRaj Singh Tomar. LoRa WANET: MAC Protocol Design Approach. Research Reviews: A Journal of Embedded System & Applications. 2017; 5(3): 19-25
- A.Bhardwaj, P.Patras,F.Gringoli,P.Serrano "Service Customization Using Open Cellular Stack Based Local Breakout" Manuscript in preparation

SCHOLASTIC ACHIEVEMENTS

2018 Winner Google Startup Weekend Roorkee
2017 Selected for Taiwan Education Experience
2017 National Winner Smart India Innovation Challenge
2017 Summer Undergraduate Research Award
2016 Quarter-Finalist Texas Instrument Innovation Challenge
2015 All India Rank 1628 in JEE Advance
2013 Provided distinction by University of South Wales during high school studies
2012 All India Rank 3 National Informatics Olympiad
2012 International Rank 305 Informatics Olympiad