Watipatsa W. Nsunza

9010 Sunset Drive Unit 1, 49103 Berrien Springs (United States)
+1 (269) 338-6375 nsunza@alumni.hust.edu.cn

16 December 2019

Dear Sir/Madam,

My name is Watipatsa W. Nsunza. I'm a graduate of Huazhong University of Science and Technology (HUST) in Wuhan, China. I completed my Bachelor of Engineering in Telecommunications (June, 2016) with honors and later completed my Master of Science in Information and Communications Engineering under the Chinese Government Scholarship-CUP (June, 2018). I have interned as a Lead Embedded Linux Engineer at the Internet Technology and Engineering Research & Development Center of HUST since December 2014, and at the FiberHome Telecommunications Technologies Co. Ltd of Wuhan in June 2016.

I have strong research interests as well as publications in embedded software development for IoT and Modern Communication Technologies. I have done extensive work and research in the areas of Wireless Networks, Optical Transport Networks, Software Defined Networks, Software Defined Radio, Internet-of-Things, Network Measurement, Cloud Computing, Peer-to-Peer Streaming, and Deep Learning (ML). This has required a deep knowledge of the Linux kernel, programming languages, and embedded systems.

I am pursuing an opportunity to advance my career, to lead as well as contribute in my areas of specialty. It will be a great honor to work with your team of developers to build meaningful software for next generation communication networks and the Internet-of-Things. I am fluent in English, and I have also attained an intermediate level of Chinese while studying in China. I am confident that I have the quality training and practice to excel as a Developer of Wireless Connectivity in your company. I am confident that I can quickly adapt to new development concepts and technologies. Please do not hesitate to contact me at any time. Thank you in advance for your consideration.

Sincerely,

Watipatsa W. Nsunza

Curriculum vitae

PERSONAL INFORMATION

Watipatsa W. Nsunza

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http://cloud.eic.hust.edu.cn:8084/~kenyon22/ https://github.com/kenyon22 https://www.linkedin.com/in/kenyon22

Sex Male | Nationality Malawian

WORK EXPERIENCE

09/01/2018–08/31/2019

Lecturer

Wuchang Shouyi University, Wuhan (China)

- Oral English Course
- C/C++ Programming Language
- Java Programming Languae

12/2014–01/2019

Embedded Linux Engineer - Intern

Huazhong University - Internet Technology and Engineering Research & Development Center, Wuhan (China)

- Embedded Systems Design/ Implementation (OpenWRT, OpenFlow)
- Network Simulation/ Emulation
- Network Performance Evaluation
- Redmine Server Recovery/ Maintenance/ Deployment
- Project Management (Redmine)
- Database Management (SQL)
- Conference/ Website publications
- Peer article review
- Weekly report delivery/ presentations
- Manuscript writing (latex)

06/2016–08/2016

Optical Network Engineer - Intern

FiberHome Communication Technologies Co. Ltd, Wuhan (China)

- GPON principle
- AN5116-06B Hybrid Platform
- ANM2000 Data and Voice service configuration
- Optical Fiber Deployment and OTDR test
- SDH/DWDW principle and technology
- OTN Configuration
- FonsWeaver780, FONST3000, FONST4000 configuration (using OTNM2000)
- Enterprise Resource Planning (EPICOR 10.2)

06/2014–08/2014

Electronics Engineer - Intern

Kenna Electronic Co. Ltd, Wuhan (China)

- Electronic Transformer principle and design
- Soldering techniques (handcraft, wave crest, reflux)

- Schematics Reading
- PCB Design

- Electronic system assembly and diagnostics

EDUCATION AND TRAINING

09/2016–06/2018

MSc. Information and Communications Engineering

Huazhong University of Science & Technology, Wuhan (China)

■ General

- Chinese Language

■ Occupational

- Stochastic Processes, Digital Communication, Advanced Digital Signal Processing, Computer Network, Mobile Communication System, Self-organizing Wireless Network, Fundamental of Digital Electronic Technique, JAVA Programming, Computer Network Security

■ Graduation Research Project

- Design and Implementation of Programmable Edge Network Systems in a Software-Hardware Co-design Approach

GPA: 3.0

09/2012–06/2016

B.Eng Telecommunications Engineering

Huazhong University of Science and Technology, Wuhan (China)

■ General

- Junior Chinese, Introduction to China, Physics (VI), Linear Algebra, Calculus (VII),

■ Ocupational

- Computer Technology, Circuit Measurement and Experiments (II), Circuit Theory (II), Complex Function and Integral Transform, Engineering Graphics, Physics Experiments (I), Advanced Programming (C), Electrical Engineering Practice, Probability and Mathematics Statistics, Digital Circuit and Logic Design, Signal and Linear System, Electronic Circuit Design, Analog Electronics (I), Data Structure, Stochastic Processing, Principle of Microcomputer and Experiments, Operating Systems, Electromagnetic Communication, Circuits, Fundamentals of Information Theory, Hardware Course Project, Senior Programming Design, Computer Network, Microwave Technology, Principles of Communication.

■ Graduation Research project

- Design and Implementation of a Smart Home Router based on Intel Galileo Gen 2

GPA: 3.0

PERSONAL SKILLS

Mother tongue(s): English, Chichewa

Foreign language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
Chinese	B2	B1	B2	B1	B1

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
Common European Framework of Reference for Languages

Communication skills

- Good communication skills gained through presentations and management.
- Excellent social skills with colleagues, supervisors, and clients gained through interactions.
- Confident, Empathetic, Open-Minded, Respectful.

Organisational / managerial skills

- Leadership (Project Leader, Fellowship President 2 years)
- Good organisational skills gained through Project Management
- Hard Working with Self-initiative
- Team operative and dependable
- Punctual and Responsible
- Adaptive and Eager to learn

Job-related skills

- Good command of quality control process
- Mentoring skills (Trained old and new Interns)

Digital skills

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem-solving
Proficient user	Proficient user	Proficient user	Proficient user	Proficient user

Digital skills - Self-assessment grid

Technical:

- Platforms: Linux, Windows, Mac
- C essentials
- Java Development: Core, JEE, Frontend (SWING/HTML/JS/Angular) Oracle,
- PL/SQL, backend DB, Android SDK, Spring and Spring boot
- OOP/ C++ - classes, encapsulation, polymorphism, overloading/ overriding, templates
- Algorithms - search, sort, b-trees
- Network fundamentals - 802.11/802.15.4 standards/specs, protocols (TCP/IP, UDP, DHCP, SSH, FTP, HTTP, SNMPDNS, VLANs, OpenFlow, BLEMesh over IPv6), switching, IPsec VPN)
- Network tools (NS-3, Mininet, Wireshark, Packet Tracer, Iperf, Matlab, Firewalls, Port mapping, Network scanning)
- Optical Network Deployment and Management (ANM2000, AN5116-06B, GF622-06A, FONST3000)
- Server/ Database deployment & management (Apache, PhP, SQL, Epicor 10.2, Redmine)
- Linux kernel (Ubuntu Genome-terminal, OpenWrt firmware development, etc.)
- Microprocessor fundamentals - interrupt processing, registers, assembly code, etc.
- Microcontroller fundamentals - ADC, DAC, Timers, PWM, DMA, watchdog, etc.
- Memory - NOR, NAND, SRAM, DRAM, Wear leveling
- Basic protocols - I2C, SPI, UART, LIN
- Advanced protocols - SATA, PCIE, USB, CAN, MOST
- Concurrent/ parallel programming - MPI for SMP etc.
- UML - class diagram, component diagram, state diagram, sequence diagram
- Perl or Python for scripting, for e.g. to modify simple text files.
- Basic electronics - schematics, oscilloscope, multi-meter, soldering
- Embedded programming (switch debouncing, resistive ladder switches, rotary encoders, etc.
- Software engineering - SDLC, CMMI, SCRUM, version control (ClearCase, SVN/Git/Hg), bug tracking (JIRA), static code checking, Lint, unit testing, continuous integration
- Build environments - makefile, cmake
- FPGA programming (OpenCL, Verilog, VHDL, Xilinx Vivado and SDAccel)
- System Hardware/software configuration (Server, Desktop, Laptop, Smartphones, etc

Software:

- Cloud Computing (AWS, Google, Microsoft, etc.)
- Office suites (Corel Draw, Word, Excel, Power Point, Access Database, Outlook Express, etc.)
- Web Design and hosting (CSS, Html5, JavaScript, Wordpress)
- Autodesk designing software (AutoCad, 3ds Maxx, Inventor)
- Protel SE PCB Designing software
- Visual Studio (C, C++, C# Intermediate level programming)
- Eclipse IDE (Java and OOP, Android SDK developer tools)
- Android Studio
- FPGA programming (OpenCL, Verilog, VHDL, Xilinx Vivado and SDAccel)
- Sony Sound and Video Editing software (Vegas Pro, Acid Pro)
- Graphic Editing and Design (Adobe Photoshop Studio, Macromedia Fireworks)

Driving licence B

ADDITIONAL INFORMATION

Projects

- Design and Implementation of Programmable Edge Network Systems in a Software/Hardware Co-design Approach. Individual Project - Designed and Accelerated a Network Intrusion Detection System (NIDS) using distributed computing hierarchies; C++, Java, Linux, Python, OpenCV. (Nov 2017 – Jul 2018)
- Design and Implementation of a Low-Cost Software Defined Wireless Network Testbed for Smart Home. Collaborated Project *(Leader)* - In charge of implementing a software-defined edge-cloud network architecture programmable on SoC platforms (Intel Galileo Gen2, Digilent Zybo and Zedboard); C, C++, Java, Linux. (Dec 2015 – Jun 2017)
- Peer-to-Peer Video Communication. Individual Project - Developed a P2P Video Call software on top of the Microsoft DirectX.Capture and Direct Show Video Libraries; C#, Windows. (Dec 2015 – Jan 2016)
- Digital Basketball Training System. Collaborated Project *(Leader)* - Designed/Implemented Motion Capture System and Developed Virtual basketball environment. C, C++, Java, Windows, Linux, 3Ds Max. (Feb 2015 – Aug 2015)
- Smart Home Sensor Network prototype. Collaborated Project *(Leader)* - Designed/Implemented smart home sense/ control/ monitoring/ security features. (Dec 2014 – May 2015)
- SDN-based Routing for Smart Homes. Collaborated Project *(Participant)* - Configured Operating System drivers and generated system firmware. (Dec 2014 – May 2015)

Publications

- Nsunza W W, Tetteh R A-Q, Hei X. Accelerating a Secure Programmable Edge Network System for Smart Classroom. in: Proceedings of IEEE International Symposium on Smart City and Informatization (iSCI), Oct, 2018.
- Nsunza W W, Rutunda S, Hei X. Design and Implementation of a Low-Cost Software Defined Wireless Network Testbed for Smart Home. in: Wang G, Atiquzzaman M, Yan Z, et al., editors, Proceedings of Security, Privacy, and Anonymity in Computation, Communication, and Storage, Cham: Springer International Publishing, 2017, 379–388.
- Nsunza W W, Hei X. Design and Implementation of a Smart Home Router based on Intel Galileo Gen 2. in: Proceedings of 12th EAI International Conference on Testbeds and Research Infrastructures for the Development of Networks & Communities (TRIDENTCOM), Sep, 2017.

References References available on request