

राष्ट्रीय न्यायालयिक विज्ञान विश्वविद्यालय

(राष्ट्रीय महत्व का संस्थान,गृह मंत्रालय, भारत सरकार)

**National Forensic Sciences University** 



(An Institution of National Importance under Ministry of Home Affairs)

<u>Appendix – A</u>

#### **Education Qualification for Internship**

Sr. No.	Designation	Nos.	
1	GIS/Remote Sensing RS Engineer	2	
2	Electronics & Electrical Engineer (VLSI/FPGA/SoC/Control)	1	
3	Database Developer with GIS expertise	1	
4	Network Engineer	1	
5	RF Engineer	1	
6	Data Analyst (R/Python)	1	
7	Full Stack Developer	1	
	TOTAL	8	

#### **Detailed Requirement**



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### NFSU Q B Reven supr 34

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			Remote Sensing and GIS Data     analysis	
2.	Electronics & Electrical Engineer (VLSI/FPGA/SoC/Control)	1	Skillsets C/C++ HDL Python Hardware Interfacing MATLAB Basic Electronics Eagle CAD/ Fritzing Control law Ansys PLC & SCADA Arduino	Final year M.Sc./ M.E./ MTech. In Electrical, E&C, E&E, and E&TC Engineering Or Final Year B. Tech /B. E /B. Sc in the similar discipline
		and and a	<ul> <li>Job Description</li> <li>Familiar with Electrical CAD tools, Allegro, Altium, Mentor, etc.</li> <li>Capable of basic lab skills - Soldering, debugging with Oscilloscopes, DMM, etc.</li> <li>Proficiency in PCB layouts and noise mitigation strategies.</li> <li>Strong problem-solving, technical, math, and science skills.</li> <li>Strong written and verbal communication.</li> <li>Hands-on experience in embedded systems.</li> <li>Designing, inspecting, testing, and updating electronic systems, components, equipment, and software.</li> <li>Showing initiative and keeping up with advancements in Electronics.</li> <li>Use debuggers, scopes, and emulators to resolve issues.</li> <li>Experience in antenna design and simulation for Cellular, WIFI, GNSS</li> </ul>	
3.	Database Developer with GIS expertise	1	Skillsets         • Data analytics & Processing         • Java/JS         • Python/ R / Ruby on Rails	Final Year M.Sc. in IT/M.Sc. in CS/ M.E./ MTech. In



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4.       Network Engineer	<ul> <li>SQL</li> <li>PostgreSQL</li> <li>NoSQL</li> <li>MongoDB</li> <li>Hadoop</li> <li>JSON/XML support for SQL</li> <li>ETL - Data Pipeline</li> </ul> Job Description <ul> <li>Design and create DB</li> <li>Handle AI/ML-based code for DB</li> <li>Estimate deadlines as good as you can</li> <li>Write documentation</li> <li>Define the data elements and data structure that our team should leverage to enable analytical and reporting capabilities for our business development team.</li> <li>Design and influence operational best practices for reporting and analytics</li> <li>Experience in handling Big Data</li> <li>Preparing and delivering business reports to the senior management team</li> <li>Help other teams complete their products</li> <li>Skillsets</li> <li>Python/ipython/C/C++</li> <li>Data analytics &amp; Processing</li> <li>Network Forensics</li> <li>MPLS Tech</li> <li>GNS3</li> <li>Comptia Network+</li> <li>CCNA/CCNP</li> <li>IoT/ MQTT</li> </ul> <li>Job Description     <ul> <li>Excellent Communication and Networking Skills</li> <li>Experience with Switches and Routers</li> <li>Juniper/ NetGear/ Cisco / D-Link/ TP-link product experience</li> </ul> </li>	Software engineering/ Computer Engineering Or Final year B.Tech /B.E /B.Sc in the similar discipline Final year M.Sc. in IT/M.Sc. in CS/ M.E./ MTech. In Software engineering/ Computer Engineering/E&C, E&E and E&TC Engineering Or Final Year B.Tech /B.E /B.Sc in the similar discipline



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<ul> <li>Simulation Tools (HFSS, CST Microwave Studio, ADS)</li> <li>Knowledge of Wireless Communication Protocols (LTE, 5G, Wi-Fi, Zigbee, Bluetooth)</li> <li>RF Circuit Design</li> </ul>	Final Year M.Sc. / M.E. / MTech. in Electronics, Felecommunication, RF & Microwave Engineering, or elated field
5.       RF Engineer       1       Skillsets:       Fi         •       Simulation Tools (HFSS, CST Microwave Studio, ADS)       Fi         •       Knowledge of Wireless Communication Protocols (LTE, 5G, Wi-Fi, Zigbee, Bluetooth)       Fi         •       RF Circuit Design       Fi	M.E. / MTech. in Electronics, Felecommunication, RF & Microwave Engineering, or
5.       RF Engineer       1       Skillsets:       Fi         •       Simulation Tools (HFSS, CST Microwave Studio, ADS)       EI         •       Knowledge of Wireless Communication Protocols (LTE, 5G, Wi-Fi, Zigbee, Bluetooth)       To RF Circuit Design	M.E. / MTech. in Electronics, Felecommunication, RF & Microwave Engineering, or
5.       RF Engineer       1       Skillsets:       Fi         •       Simulation Tools (HFSS, CST Microwave Studio, ADS)       Microwave Studio, ADS)       EI         •       Knowledge of Wireless Communication Protocols (LTE, 5G, Wi-Fi, Zigbee, Bluetooth)       To RF Circuit Design	M.E. / MTech. in Electronics, Felecommunication, RF & Microwave Engineering, or
5.       RF Engineer       1       Skillsets:       Fi         •       Simulation Tools (HFSS, CST Microwave Studio, ADS)       Microwave Studio, ADS)       EI         •       Knowledge of Wireless Communication Protocols (LTE, 5G, Wi-Fi, Zigbee, Bluetooth)       To RF Circuit Design	M.E. / MTech. in Electronics, Felecommunication, RF & Microwave Engineering, or
<ul> <li>Simulation Tools (HFSS, CST Microwave Studio, ADS)</li> <li>Knowledge of Wireless Communication Protocols (LTE, 5G, Wi-Fi, Zigbee, Bluetooth)</li> <li>RF Circuit Design</li> </ul>	M.E. / MTech. in Electronics, Felecommunication, RF & Microwave Engineering, or
<ul> <li>Microwave Studio, ADS)</li> <li>Knowledge of Wireless Communication Protocols (LTE, 5G, Wi-Fi, Zigbee, Bluetooth)</li> <li>RF Circuit Design</li> </ul>	Electronics, Felecommunication, RF & Microwave Engineering, or
Knowledge of Wireless Communication Protocols (LTE, 5G, Wi-Fi, Zigbee, Bluetooth) RF Circuit Design	Celecommunication, RF & Microwave Engineering, or
Communication Protocols (LTE, 5G, Wi-Fi, Zigbee, Bluetooth) • RF Circuit Design	RF & Microwave Engineering, or
• RF Circuit Design	Engineering, or
RF Circuit Design	
	alated field
Antenna Design and Tuning     re	clated field
Spectrum Analyzers	
Vector Network Analyzers	)r
RF Filter Design	
	Final Year B.Tech /
	B.E. in a similar
	liscipline
Embedded Systems Knowledge	iscipilite
PCB Design for RF Systems	
Job Description:	
• Design, implement, and optimize	
RF systems and components,	
including antennas, filters, and	
amplifiers.	
Work with cross-functional teams	
to develop and integrate RF	
solutions into wireless	
communication products.	
• Analyze and troubleshoot RF	
circuits to ensure optimal	
performance.	
Conduct RF testing, measurement,	
and validation using relevant	
testing equipment like spectrum	
analyzers and vector network	
analyzers.	
Perform simulations and modeling	
of RF circuits using simulation	
tools like CST, HFSS, or ADS.	
Collaborate on the development of	
wireless communication systems,	
including LTE, 5G, and Wi-Fi	
technologies.	
Conduct EMI/EMC testing and	
ensure designs meet regulatory	
standards.	
• Develop and maintain RF	
documentation, including design	
specifications, test procedures, and	
reports.	



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		1		
			• Keep up-to-date with advancements in RF technologies and integrate new techniques into product development.	
6.	Data Analyst (R/Python)	2	Skillsets <ul> <li>Python/ipython/C/C++</li> <li>Data analytics &amp; Processing</li> <li>Java/JS</li> <li>MATLAB</li> <li>R</li> <li>Ruby on Rails</li> <li>SQL</li> </ul>	Final Year M.Sc. in IT/M.Sc. in CS/ M.E./ MTech. In Software engineering/ Computer Engineering/E&TC Engineering
			Lab Description	Or
		and and a	<ul> <li>Job Description</li> <li>Design and create APIs for data analytics &amp; processing</li> <li>Back-end code creation</li> <li>Handle AI/ML-based code in the back-end</li> <li>Create and update Back-End code collections Regularly</li> <li>Estimate deadlines as good as you can</li> <li>Write and maintain public packages</li> <li>Create back-end functionalities</li> <li>Write documentation</li> <li>Define the data elements and data structure that our team should leverage to enable analytical and reporting capabilities for our business development team.</li> <li>Design and influence operational best practices for reporting and analytics</li> <li>Preparing and delivering business reports to the senior management team</li> <li>Help other teams complete their products</li> </ul>	Final year B.Tech /B.E /B.Sc in the similar discipline.
7.	Full Stack Developer	1	Skillsets JAVA JavaScript SDK/ ADK Kotlin CSS	Final Year M.Sc. in IT/M.Sc. in CS/ M.E./ MTech. In Software engineering/ Computer
			<ul><li>HTML5</li><li>Python/C++</li></ul>	Engineering



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		Or
	<ul> <li>Job Description <ul> <li>Design and create APIs</li> <li>The back-end and Front-end desig and creation</li> <li>Handle AI/ML-based code in the back-end</li> </ul> </li> </ul>	Final Year B.Tech /B.E /B.Sc in the similar discipline
	Create and update Postma collections	1
	<ul> <li>Estimate deadlines as good as yo can</li> </ul>	1
	<ul> <li>Write and maintain publi packages</li> </ul>	2
	• Create back-end functionalities	
	• Write documentation	
	Implement designs	
	• Help other teams complete the products	r

