



Arnab Mondal

MS | IIT KGP || Software Eng.
| LISTER || BE | IIESTS

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About Me

I'm an exceptionally energetic, precise and result situated analyst cum software engineer with technical experience in the domain of Cyber-physical Systems (CPS), Internet of Things (IoT), and Software Development. I love working in a team since it helps to learn and grow much faster. As I like the saying: 'Talent wins games, but teamwork and intelligence win championships'.

Profiles

- LinkedIn
- Google Scholar

Soft Skills



Working Experience

- Jun 2017 – Mar 2021 **Hardware Software Co-design and CAD design** SRIC, IIT Kharagpur
As **Research Consultant**
 - # Developed a programmable testbed with open architecture for scheduling and analysis of Multi-hop Control Networks in CPS.
 - # Created a software tool using AngularJS, Python, and Open-modelica for automated generation of smart micro power grid design. [Github Repo]
- 2018 – 2020 **Experimental demonstration of wireless CPS** CSE, IIT Kharagpur
As **Teaching Assistant**
 - # Demonstrated of a distributed embedded system, where multiple sensor nodes exchanged control signals over a wireless network.
 - # Mentored a couple of students' group in the course term projects "Delay-Aware Real-Time Wireless Networked Control System" and "Securing Real-time Multi-hop Wireless Networked Control System". [Course Webpage]
- Sep 2015 – May 2017 **End-to-end Web Development** Lister Technologies P Ltd, Chennai
As **Software Engineer**
 - # Responsible for Extended Promotion features, Third-party integrations (e.g. Google Map, Oracle Responsys etc.), Shopping Cart development, Extended Checkout flow, Extended Order management, Order Export flow development, MyAccount development and implementing Flexible Design for eight countries websites both Desktop and Mobile that offer to learn of more than 30 languages. [https://www.rosettastone.com]
 - # Developed fast and powerful web interfaces using UIKit, a lightweight and modular front-end framework.
 - # Worked on BigCommerce, Webhooks and Management APIs.
 - # Worked with Salesforce, a customer relationship management solution, and ContextTip's Recommendation engine that uses data that lives in Salesforce.

Education

- Jan 2018 – ongoing **MS by Research (Supervisor: Dr Soumyajit Dey)** IIT Kharagpur
CGPA/Marks: 7.11/10; Focus: Wireless Cyber-physical Systems.
- Jun 2011 – May 2015 **Bachelor of Engineering** IIEST Shibpur
CGPA/Marks: 8.02/10; Focus: Electrical Engineering.
- May 2008 – May 2010 **Higher Secondary – 12th** Midnapore Collegiate School (WBCHSE)
CGPA/Marks: 87.6%; Focus: Mathematics, Physics, and Chemistry, and Computer science.
- Jun 2005 – April 2008 **Madhyamik - 10th** Keshiary High School (WBBSE)
CGPA/Marks: 93.5%; Focus: Physical science, Mathematics, Life science, and Arts.

Awards and Achievements

- 2011 GEN Rank 555 (Top 0.5 percent) out of approx. 1,30,000 candidates. Joint Entrance Exam (WBJEE)
- 2010 Offered Merit Scholarship (Top 50 in State out of nearly 6,00,000 students). Higher Secondary Exam
- 2009 Certificate of merit for being placed in Statewise Top 1% and 10% at +2 level in Physics and Astronomy. National Standard Exam
- 2008 Rank 5 in Kharagpur Sub-division and Honored "Academic Distinction" for securing 100% marks in Mathematics and 99% in Physical Science. Madhyamik

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Hard Skills

Programming:

Arduino, Modelica	● ● ● ● ●
Python, C, HTML(5)	● ● ● ● ●
Bootstrap Framework	● ● ● ● ●
CSS(3), JSON, SQL	● ● ● ● ●
JQuery, Javascript	● ● ● ● ●
Angular JS	● ● ● ● ●
Matlab, PHP	● ● ● ● ●
XML, LESS, Ajax	● ● ● ● ●
C++, SASS/SCSS	● ● ● ● ●
Java, SCALA, VHDL	● ● ● ● ●

Tools / Frameworks:

Arduino IDE, Latex	● ● ● ● ●
OpenModelica 1.1x.x	● ● ● ● ●
MS Office, Sublime	● ● ● ● ●
Magento (EE 1.14.x)	● ● ● ● ●
MATLAB, Simulink	● ● ● ● ●
XAMPP / LAMP	● ● ● ● ●
Jira, Git, Eclipse	● ● ● ● ●
Qt, NetBeans7	● ● ● ● ●
PSCAD (v4.x)	● ● ● ● ●
BigCommerce	● ● ● ● ●
Oracle Maxymiser	● ● ● ● ●
Swing (Java)	● ● ● ● ●
Salesforce, Maxima	● ● ● ● ●
LabVIEW, SCADA	● ● ● ● ●

Hardware:

NRF24L01+	● ● ● ● ●
RIGOL DS1102E	● ● ● ● ●
Arduino UNO & MEGA	● ● ● ● ●
LoRa SX 12xx	● ● ● ● ●
OPAL-RT OP4510	● ● ● ● ●
PMU	● ● ● ● ●

Languages

🌐 Bengali (Mother tongue)

📄 English (Professional & Daily use)

🎵 Hindi (Survivable)

Publications

Mar 2021	Proactive feedback for networked CPS <i>Ghosh and Mondal, et al.</i> 36th ACM/SIGAPP Symposium on Applied Computing (SAC '21)
Jul 2020	A Programmable Open Architecture Testbed for CPS Education <i>Ghosh and Mondal, et al.</i> IEEE Design & Test (Volume: 37, Issue: 6, Dec. 2020)

Internships and Projects

Aug 2014 – Jun 2015	Analysis of Power System Networks for Optimal Placement of Phasor Measurement Units(PMUs) <i>Department of Electrical Engineering, IEST Shibpur</i> Justified the proper placement of optimal no. of PMUs in a balanced section of the DVC GRID 220KV(Existing) to make the Smart Power System Grid topologically observable.
Jun 2014 – Jul 2014	Inflationary Universe From Einstein Gravity (Gravitation and Cosmology) <i>Manipal Centre for Natural Sciences(MCNS), Manipal University</i> Worked on Friedmann-Lemaitre-Robertson-Walker (FLRW) Space-times for Flat Universe and explained inflationary universe from vacuum dominated stress-energy.

Vocational Trainings

Dec 2013 – Jan 2014	Hydro-electric 900 MW power generation <i>As Trainee Operation Engineer</i> PPSP, WBSEDCL Closely monitored Pump Storage Hydro 900 MW power generation, underground Power House, SCADA (Supervisory Control And Data Acquisition), 400kV GIS, and 132/33/11kV Substation.
Apr 2014 – Jun 2014	Stadium services during Pepsi IPL 2014 <i>As Highmast Trainee Engineer</i> Eden Garden, Kolkata Monitored the lights (400V double-ended filament 2kW metal halide lamps) which provide illumination of 2,500 lux (vertical) on the pitch, 2,000 lux in the 30-yard-circle and 1,500 lux across the outfield.

Positions of Responsibility

Jul 2012 – Apr 2015	Class and Placement Representative EE Dept., IEST Shibpur Elected by 63 students of EE 2015 batch for ensuring good placements and coordination between administration and students.
Oct 2011 – Jul 2015	University Photographer IEST Shibpur Appointed to cover the IEST Inaugural Ceremony, Convocation, annual Techno-Management Fest, and the annual Cultural Fest .

Extra-Curricular Activities

Social and Cultural	# Awarded Abritty VISHARAD in 2007-08 in Recitation securing 1st Class by Sarbabharatiya Sangeet-O-Sanskriti Parishad. # Certificate of "Diploma in Guitar" by Shaw Academy in 2020. # Member of Social and Cultural Committee in ATDC Department, IIT Kharagpur since 2019. # Member of IIT KGP photography club- "La Obscura" since 2019 and IEST, Shibpur photography club- "CATHARSIS" since 2012.
Technical	Won 1st and 2nd prize (out of nearly 30 teams) as a member of group of 5 in "JUNK-E WARS" event of INSTRUO 2012 and 2013.
Games and Sports	Represented VSRC Hall, IIT Kharagpur in inter-hall Cricket Tournament in 2019-20; ATDC Department, IIT Kharagpur in inter-department RS Cricket Premier league in 2020.

June 15, 2021

Arnab Mondal