

# Shaswat Satapathy

b516038@iiit-bh.ac.in | +91 88397 18453

<http://www.iamshaswat.ml>

"Just keep swimming" - Finding Nemo (2003)

---

EDUCATION	<b>B.Tech in Computer Engineering</b> , IIIT Bhubaneswar (exp.) 2020
	<b>Intermediate (12<sup>th</sup>) in Science</b> , Delhi Public School, Bhilai 2016
	<b>Matriculate (10<sup>th</sup>)</b> Delhi Public School, Bhilai 2014
EXPERIENCE	<b>Research Intern</b>   NeWS Lab, IIT Hyderabad Dec 2018–present Supervised by Dr. Antony Franklin and Shashwat Kumar on mobile edge caching <ul style="list-style-type: none"><li>Develop a caching policy for tile-based adaptive 360° video streaming by identifying common-FoV with real users' head movement dataset and simulate in the 5G test bed.</li><li>Develop reinforcement-learning models for proactive caching of contents with different demand probabilities in 5G edge cloud.</li></ul>
	<b>Undergraduate Research Assistant</b>   IoTCC Lab, IIIT Bhubaneswar Aug 2018–present Supervised by Dr. Suraj Sharma and Amiya Kumar Sahu on 5G security <ul style="list-style-type: none"><li>Design an application layer security protocol to mitigate the attacks originating from the public access network in 5G enabled IoT Devices.</li><li>Tested the security protocol by an automated security testing tool - Scyther.</li></ul>
	<b>Summer Research Intern</b>   IIIT Delhi May–Aug 2018 Supervised by Dr. Sumit J Darak on Multi-arm bandits in Cognitive Networks <ul style="list-style-type: none"><li>Design an algorithm to enable users to learn channel statistics and exploit optimum channels via explore-exploit based MAB algorithm.</li><li>Compare the performance of state-of-the-art MAB algorithms using python and numpy.</li></ul>
	<b>Winter Research Intern</b>   Advanced Lab, IIT Patna Dec 2017–Jan 2018 Supervised by Dr. Rajiv Misra and Ajay Pratap on resource allocation in 5G <ul style="list-style-type: none"><li>Model the resource allocation problem in heterogeneous 5G networks as an NP-hard problem.</li><li>Propose stable matching based distributed algorithm to solve the resource allocation problem at efficient computation cost, for heterogeneous 5G networks.</li></ul>
SERVICES	<b>Bakul Foundation</b> Since 2018 <ul style="list-style-type: none"><li>Promoting the reading habit and developing imagination and creativity among children.</li><li>Recently on the occasion of Gandhi Jayanti, took up various activities with children at shelter homes and government schools in Bhubaneswar.</li></ul>
	<b>Papers We Love- Bhubaneswar Chapter</b> Aug 2018 <ul style="list-style-type: none"><li>Co-founder of the Bhubaneswar chapter.</li><li>Papers We Love (PWL) is a community built around reading, discussing and learning more about academic computer science papers.</li></ul>
	<b>Nearbuy</b> Apr 2017 <ul style="list-style-type: none"><li>Social media marketing intern.</li><li>Helped market the Qafila event to a larger audience.</li></ul>
AWARDS	<b>Paper Presentation competition</b> , Advaita-2018 2018
	<b>S.A.I.L Scholarship</b> , Bhilai Steel Plant yearly
	<b>N.T.S.E Scholarship</b> , C.B.S.E yearly

INDUSTRIAL PROJECTS	<p>Company enterprise network   CCNA: R &amp; S <span style="float: right;">Summer 2017</span></p> <ul style="list-style-type: none"> <li>• Proposed the design and implementation of a company's enterprise network to check the incoming &amp; the outgoing traffic and to maintain some security concepts as well.</li> <li>• Deployed and configured Cisco Hardware products including but not limited to routers, switches, access points, and firewalls.</li> <li>• <b>Tech Stack:</b> Cisco packet tracer; networking and security protocols</li> </ul> <p>MyPoll: The secure voting DAPP   Rajasthan Hackathon 4.0 <span style="float: right;">March 2018</span></p> <ul style="list-style-type: none"> <li>• Built a distributed Voting application using the concept of blockchain and computer vision (face identification and recognition).</li> <li>• I wrote the solidity codes for the DAPP.</li> <li>• <b>Tech stack:</b> Ethereum, solidity</li> </ul>
COMPETENCES	<p><b>Languages</b> Odia (<i>native</i>), English and Hindi ( <i>working proficiency</i>)</p> <p><b>Techniques</b> C/C++, Python, Java, <math>\LaTeX</math></p> <p><b>Optimisation Tools</b> CPLEX, Gurobi</p> <p><b>ML Libraries</b> NumPy, Pandas, scikit-learn, Matplotlib</p> <p><b>Platform</b> Anaconda Navigator, Jupyter Notebook, Cisco packet tracer, GNS3</p>
RELEVANT COURSES	<p><b>CCNA: Routing and switching</b>, Network Bulls <span style="float: right;">June 2017</span></p> <p><b>CCNA: Security</b>, Network Bulls <span style="float: right;">July 2017</span></p> <p><b>Android</b>, Internshala <span style="float: right;">Apr 2017</span></p> <p><b>Energy management in Cloud Data Center</b>, GIAN by MHRD <span style="float: right;">Dec 2017</span></p> <p><b>Ethical hacking and Cyber security</b>, GTP <span style="float: right;">Feb 2018</span></p>
PUBLICATIONS	<p>[1] Sharma, S., <b>Satopathy, S.</b>, Singh, S., Sahoo, A.K., Obaidat M.S., Saxena, S., Puthal, D. "Secure authentication protocol for 5G enabled IoT network." In: <i>5th IEEE International Conference on Parallel Distributed and Grid Computing (PDGC)</i>, 2018.</p>
WORK IN PROGRESS	<p>[2] Pratap, A, Singh, S., <b>Satopathy, S.</b>, Das, S.K., Misra, R. " Stable Matching Based Optimal Resource Allocation in D2D-enabled Multi-tier Networks."</p> <p>[3] <b>Satopathy, S.</b>, Singh, S., Darak, S.J. "Distributed algorithm for dynamic cognitive ad-hoc network."</p> <p>[4] <b>Satopathy, S.</b>, Singh, S., Shashwat, K., Franklin, A. " Tile-based adaptive Caching policy for 360° video streaming in 5G Edge Cloud"</p>