

# Arjoonn Sharma

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[arjoonn.com](https://arjoonn.com) [github.com/thesage21](https://github.com/thesage21) [gitlab.com/thesage21](https://gitlab.com/thesage21) [Twitter/arjoonn1](https://twitter.com/arjoonn1) [Linkedin/in/arjoonn](https://linkedin.com/in/arjoonn)

<b>Education &amp; Employment</b>	<b>Notable (tasks/achievements)</b>
Midpath software  Sept 2022 - current	<ul style="list-style-type: none"><li>- <b>Director + Software Engineer</b><ul style="list-style-type: none"><li>- Delivered fine tuned LLM systems for<ul style="list-style-type: none"><li>- on-prem programming and transpiling support. <b>API LLM usage dropped by 68%</b></li><li>- Assisted debugging of distributed systems. <b>Incident response time dropped from 30m to 5m</b></li><li>- Assisted customer response and incident reaction.</li></ul></li><li>- Delivered RAG system for multi-platform company storage (drive + slack + chat)<ul style="list-style-type: none"><li>- For quick overviews of projects. <b>Project overviews are now possible.</b></li><li>- Edge case searches. <b>Able to search for edges across corporate sprawl.</b></li></ul></li><li>- Delivered a satellite visual diff system for construction and city border monitoring and anomaly detection for<ul style="list-style-type: none"><li>- New construction detection. <b>Near real time detection and horizontally scalable.</b></li><li>- Population spread and “flood” modelling.</li><li>- Pattern recognition of structures across multiple locations to identify common themes of construction / movement / landscaping.</li></ul></li><li>- Delivered distributed multi-gateway mesh for resilient network services (caddy-mesh) in the face of zero trust architecture and all-point failures.<ul style="list-style-type: none"><li>- Survives DNS failures</li><li>- Survives single node failures</li><li>- SPOF failure degrades to acceptable RO mode</li></ul></li><li>- Delivered an offline-first learning management platform for young children.</li><li>- An offline first CI/CD system based on docker for micro projects that don’t reach github/gitea.</li><li>- A platform for efficient distribution and re-distribution of covid vaccines based on available dosage in each clinic in a city and demand in each clinic. Resource assignment modelling and</li><li>- Donations backend for yultimate.org and app.yultimate.org (django, postgres, Linode)</li><li>- Worked with smaac.in on multiple projects including webapp.smaac.in (vue, htmx, django, flask, ms-sql, e2e cloud, S3, next.js, gitlab.com)</li><li>- Worked with Resonanz group on Quicktrials.com (Django, postgres, GCP)</li><li>- Extensive work with docker and self hosted infrastructure (glitchtip, dozzle, grafana, victoria metrics, uptime monitoring)</li></ul></li></ul>
Instabase.com  Sept 2021 -Sept 2022	<ul style="list-style-type: none"><li>- <b>Solutions engineer (remote)</b><ul style="list-style-type: none"><li>- Architecture and implementation of SDLC process at the solution engineering organization.</li><li>- Building solutions for automated document processing at CITIbank, Royal Bank of Canada, MUFU Investors.</li><li>- Anchor based value extraction from documents that improved extraction performance by 10-15% on average.</li><li>- Document clustering across multiple projects and document types in a library restricted environment.</li><li>- Built tooling to help soleng be more effective on their solutions.</li><li>- Model building for document understanding based on BERT/DETR.</li></ul></li></ul>
Smaac Net Solutions Pvt. Ltd	<ul style="list-style-type: none"><li>- <b>Senior software consultant (remote)</b><ul style="list-style-type: none"><li>- Architect of web ERP system</li></ul></li></ul>

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<p>Mar 2021 -Sept 2021</p>	<ul style="list-style-type: none"><li>- Migration of codebase from VB .NET to Python + Vue.js technology stack</li><li>- Security updates for the application using modern security practices</li><li>- <b>Training / Hiring</b><ul style="list-style-type: none"><li>- Trained existing employees in python, vue, web development, database management, and RDBMS normalization techniques.</li><li>- Helped the firm introduce modern test based hiring practices and reduce it's attrition rate.</li><li>- Introduced the firm to CI/CD practices and helped them set up their first testing pipelines.</li></ul></li></ul>
<p>Premiere Digital Services  Oct 2019 - Feb 2021</p>	<ul style="list-style-type: none"><li>- <b>Software Engineer (remote)</b><ul style="list-style-type: none"><li>- Worked as a SE on a website built with flask, sqlalchemy, postgresql, redis, nginx, aws, elasticsearch, and fabric.</li><li>- We work in a fast iteration setup with practices from agile</li><li>- Wrote the bug fixing flow documentation for the product.</li><li>- Managed bug triage during IST work hours.</li><li>- Built several core features for the website including the notifications system for example.</li><li>- Improved page response times by optimizing bottlenecks in template rendering functions.</li></ul></li><li>- <b>PyJaipur</b> volunteer and meetup organizer<ul style="list-style-type: none"><li>- Organize monthly meetups, community calls</li><li>- Contribute to community software and maintain PyJaipur website.</li></ul></li><li>- <b>India Linux Users Group Delhi</b> volunteer and occasional speaker (<a href="#">link</a>)</li></ul>
<p>IIITM-Kerala CUSAT  July 2019 - Nov 2019</p>	<ul style="list-style-type: none"><li>- <b>Visiting faculty</b> AI and knowledge representation (<a href="#">link</a>)<ul style="list-style-type: none"><li>- The course was managed over gitlab</li><li>- Used CI to automate assignment testing</li></ul></li><li>- Software training: Git + gitlab for the first year MSc students.</li></ul>
<p>CLAP Research  May 2017 - Oct 2019</p>	<ul style="list-style-type: none"><li>- <b>Principal engineer</b><ul style="list-style-type: none"><li>- Lead a team of 7 on the project to launch the first version of the product called Voody. (<a href="#">link</a>)</li><li>- Lead the team to build the first document tagging system in the company. (<a href="#">link</a>)</li></ul></li><li>- <b>Research engineer</b> on closed domain search system<ul style="list-style-type: none"><li>- Built API service using bottle, nginx, mysql, mongodb, pytorch, and tensorflow.</li><li>- Developed the first document question-answer system in the company, leading to the first beta of the product.</li><li>- Developed an automated plug-and-play website helper chat bot without the need for the site to expose its APIs.</li></ul></li><li>- Handled DevOps<ul style="list-style-type: none"><li>- Built CT system with gitlab, pytest, and docker</li><li>- Built CD system with gitlab, docker</li><li>- Formulated the development cycle and improved feature development speed.</li></ul></li><li>- Built the interview management website for the company.</li><li>- Signal &amp; Noise: Talk, <a href="#">CET</a> (Fb dev circles)</li><li>- Panelist, Ethics in AI, Dhyuthi (IEEE event) (<a href="#">link</a>)</li><li>- Won <b>Huddle Kerala</b> (All India startup pitch)</li><li>- <b>NASSCOM</b> emerge 50 winners (<a href="#">link</a>)</li><li>- Singularity University talk about Random Forests (<a href="#">link</a>)</li><li>- Challenges in NLP: Talk, (Fb dev circles)</li><li>- Workshop on ML in NIT-Calicut</li></ul>
<p>Dept of IT &amp; Comm - Govt of Rajasthan</p>	<ul style="list-style-type: none"><li>- Built API server + phoneGap app for Aanganwaadi project</li><li>- <b>Lead dev</b> on 2 person team for project</li></ul>

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Aug 2017 - Feb 2018	
<b>Ernst &amp; Young</b> Jan 2017 - Apr 2017	<ul style="list-style-type: none"><li>- <b>Advanced data analytics intern</b> doing Monte Carlo based mutual fund inflation rate calculation</li><li>- Increasing sample efficiency of classic Q learning system as MSc project</li><li>- Won all India hackathon by <b>Govt of Rajasthan</b> 3/3700 (<a href="#">link</a>)<ul style="list-style-type: none"><li>- Built a website to train your own image classifiers and receive predictions on new data.</li><li>- Proposed that it may be used to provide expertise to remote villages where actual expert person might not be able to travel.</li></ul></li></ul>
<b>64 Squares</b> June 2016	<ul style="list-style-type: none"><li>- Built web dashboard for analytics app</li><li>- Performed data cleaning, deduplication</li><li>- Participated in Kaggle contest under company supervision</li></ul>
<b>Certifications</b>	<ul style="list-style-type: none"><li>- <b>TOEFL(108/120) exam 16 Feb 2019</b></li><li>- <b>GRE(327/340+4/6) exam 31 Dec 2018</b></li><li>- <b>NET exam qualified for assistant professor 5 Nov 2017</b></li><li>- <b>GATE(483) exam 11 Feb 2017</b></li></ul>
<b>MSc. Computational Science</b>  <b>IIITM-Kerala (CUSAT)</b>  Aug 2015 - Apr 2017	<ul style="list-style-type: none"><li>- First division, <b>university rank 3</b></li><li>- <b>Ranked 7 / 3902</b> in the HackerEarth SigTuple image segmentation challenge. (<a href="#">link</a>)</li><li>- Kaggle Kernels Expert with a <b>world rank of 39/ 55,000</b> (<a href="#">link</a>)</li><li>- Featured on the Kaggle Blog, No free Hunch. (<a href="#">link</a>)</li><li>- Founded SigML(Special Interest Group, Machine Learning)</li><li>- Won <b>3rd prize (project contract worth 7.5 Lakh INR)</b> in all India Rajasthan IT Day Hackathon (<a href="#">link</a>)</li></ul>
<b>BSc. Physical Sciences with computer science</b>  <b>St. Stephen's College DU</b>  July 2012 - May 2015	<ul style="list-style-type: none"><li>- First division</li><li>- Received All India Scholarship for Higher Education (<b>INSPIRE - Department of Science and Technology Govt of India</b>) for <b>all 3 years</b> of BSc. This is awarded to students who were ranked within 1 % out of 8,15,000 students who passed the exam that year (2012).</li><li>- <b>Vikas Dhaka Scholarship</b> awardee.</li><li>- President of the Web Team<ul style="list-style-type: none"><li>- Built the college website prototype along with a friend which later formed the base for the new website.</li><li>- Submitted a report on digitizing activities in the college to the principal which was later acted upon.</li></ul></li><li>- (<b>Head Programmer</b>) We worked to build the Computer Society from 5 to 32 members in 2 academic years.</li></ul>
<b>DPS Sushant Lok</b>  2009-2012	<ul style="list-style-type: none"><li>- <b>AISSCE, AISSE (CBSE) Exams</b> (School rank 2 in class 12 exams)</li><li>- AFS All India "<b>India Thailand Student Exchange</b>" member of a team of 16 students from across India.</li><li>- <b>National CBSE Science Exhibition</b> - All India winner from all schools affiliated to Central Board of Secondary Education (<a href="#">link</a>).</li><li>- <b>Head boy</b> in class 12 and <b>Vice head boy</b> in class 11<ul style="list-style-type: none"><li>- Formulated the student council structure during that time.</li></ul></li></ul>

**References** of the following professors can be made available.

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- [Dr Rajashree MS](#) Vice Chancellor APJ Abdul Kalam Technological University
- [Dr Asharaf S](#) Professor IIITM-Kerala
- [Dr T.K. Manoj](#) Professor IIITM-Kerala

## Memorable Events/Code/Creations

- Function type signature search <https://github.com/theSage21/sigsearch>
- PyJaipur core member <https://github.com/orgs/PyJaipur/people>
- Reproduction of the Lorentz embeddings paper <https://github.com/theSage21/lorentz-embeddings>
- Author of bottle-tools <https://bottle-tools.readthedocs.io/en/latest/>
- Reproduction of Stochastic Delta Rule [https://github.com/theSage21/stochastic\\_delta\\_rule](https://github.com/theSage21/stochastic_delta_rule)
- Recurrent Weighted Average implementation <https://github.com/theSage21/torchzoo/>
- Line laser based 3d point cloud generation <https://github.com/theSage21/3d-scanner>
- Did @dabeaz compilers course <https://www.dabeaz.com/compiler.html>
- Contributed new dataset to Facebook ParlAI <https://github.com/facebookresearch/ParlAI/pull/983>
- OSFY: An overview of AI <https://opensourceforu.com/2017/12/story-behind-pervasive-ai/>
- OSFY: Managing your reading with espeak <https://opensourceforu.com/2016/06/bookread-software-reads-books-aloud/>
- OSFY: Open Judge <https://opensourceforu.com/2015/11/openjudge-an-online-judge-for-offline-programming-contests/>
- OSFY: Converting plaintext to handwriting <https://opensourceforu.com/2016/11/converting-plain-text-handwritten/>
- OSFY: Coding in indic languages <https://opensourceforu.com/2015/09/pytongue-programming-in-non-english-languages/>