# A.N. Shyam Sundar

https://anshyamsundar.github.io/PersonalWebsite/

**9588 Forest Lane, Apt 908, Dallas, TX – 75243 Phone: 1-469-922-8547 Email: an.shyamsundar@yahoo.com**

**EDUCATION:**

University of London, London, UK — Dec 2025
**Bachelor of Laws, Honors** — Grade: 2:1, Merit

Clemson University, Clemson, SC — May 2011
**Master of Science in Electrical Engineering** — GPA: 4.00/4.00
**Minor: Computer Science**
**Specialization**: Robotics, Computer Vision, Artificial Intelligence, Control

National Institute of Technology, Tiruchirappalli, India — Jun 2009
**Bachelor of Technology in Electronics and Communication Engineering** — GPA: 8.26/10.00

**RELATED EXPERIENCE:**

***Software Engineer / Tech Lead, DCG Systems / Thermo Fisher Scientific*** — Jul 2012-Present

- **Principal Developer and Maintainer** of Nanoprober and AFM product lines
- Train manufacturing teams and oversee all production systems' software
- Spearhead development of Image Processing/Vision Algorithms
- Software security, licensing, contracts and legal review/compliance
- Hardware interfacing via APIs and protocols
- Develop utilities to aid tool configuration, management and enhancements
- Primary expert for in-house IT and engineering/manufacturing tool support
- Lead resource for troubleshooting, customer escalations and field support

***Electrical Controls and Software Engineer, Qualitek-VIB*** — Aug 2011-Jul 2012

- **Lead Applications Engineer** for core product lines – QCS and PCS
- **Principal Developer**, new product line – ProTrace Plant Process Monitoring
- Allen-Bradley, Modicon PLC programming, troubleshooting and support

**SELECTED ENGINEERING PROJECTS:**

- Development of a Low Noise Switch Matrix — Jan 2026-Present
- Refactoring, restructuring Nanoprober 5 codebase and architecture — Nov 2025-Present
- Freeze Switch and Load Testing modules for Nanoprober 5 — Jan 2025-Nov 2025
- Security and penetration testing for Nanoprober 5 qualification — Jun 2025-Nov 2025
- Probe motion and path-planning algorithm — Jan 2025-Jun 2025
- Hyperion Atomic Force Microscope platform migration — Jan 2024-Dec 2024
- Nanoprober platform migration — Jan 2022-Dec 2023
- Automated probe landing — Jan 2020-Dec 2021
- EBIRCH module to enable EBAC/EBIC imaging — Jan 2019-Dec 2019
- Nanoprober LR and HP product line development — Jan 2017-Dec 2018
- Reverse engineering Atomic Force Microscope — Jan 2016-Dec 2016
- Automated Cross Cleaning — Jun 2014-Jan 2016
- Probe tip detection and auto-focus/wobble/stigmation algorithm — Dec 2012-Jun 2014
- PLL-based force feedback module — Jul 2012-Oct 2012
- ProTrace Plant Process Monitoring Software — Dec 2011-Jun 2012
- Graduate Thesis: Pose estimation and robotic disassembly — Jan 2010-Apr 2011
- Development of a Universal Robotic Gripper — Dec 2010-Mar 2011
- Control of Mobile Robot using Hand-Gestures — Mar-Apr 2010
- Enhancement of NASA's Moon Landing Videos — Nov-Dec 2009

**LEGAL WORK:**

- Public impact litigation and advocacy, Bhavsar v Const LLC May 2023-Present
- Public impact litigation and advocacy, Re Prime Core Technologies, et al Aug 2023-Present
- Assist Pro Se litigants in family court, bankruptcy and civil litigation Aug 2018-Present
- Public impact litigation and advocacy, Re BlockFi Inc., et al Nov 2022-Jan 2023
- Public impact litigation, Collin County Commissioners Court Oct 2017-Dec 2017
- Texas Small Claims Court filings and arguments Dec 2013-Dec 2015

**SOFTWARE SKILL SET:**

**Languages:**

C#, C, C++, Python, Java, Visual Basic, Perl, LISP, SQL, HTML, PHP, Javascript, Ajax, Windows scripting, Verilog, Assembly languages of microprocessor 8086, microcontrollers 8051, 6811, 6812 and the ARM Processor.

**Packages, Frameworks and Libraries:**

Visual Studio, .Net Core, ASP.NET, gRPC, WPF, STL, TensorFlow, AWS, Kubernetes, Docker, LightningChart, NI Measurement Studio, Syncfusion Essential Studio, RSLogix 500 and 5000, RSLinx, Aria, AutoCAD, jQuery, Matlab, Octave, Blepo, OpenCV, EmguCV, OpenGL, PyBlueZ, PySerial, Xlrd/Xlwt, Notepad++/Regex, LaTeX, MathType, Magick++, CommSim, Photonics CAD, Proteus ISIS, Code Composer Studio, Keil, Adobe Photoshop, GIMP, Inkscape, Quartus, VIRCA, Oracle, NetBeans, VMWare ESXi, TortoiseSVN and Git.

**Operating Systems:**

Windows, Linux (Ubuntu, CentOS), UNIX and Android.

**Certifications:**

Java Web Development, Certified ScrumMaster, Heartsaver First Aid CPR AED.

**LEGAL SKILL SET:**

Legal strategy, research, drafting, filing, litigation, contract review and negotiation.

**SELECTED PATENTS, PUBLICATIONS AND RESEARCH:**

- Capacitance-based detection of probe contact, **Shyam Sundar Aswadha Narayanan** (US Patent application US-20240385238-A1)
- "Pose Estimation for Robotic Disassembly using RANSAC with Line Features" – **Shyam Sundar**, Dr. Richard Groff
- "CPW Structures and Discontinuities" – **Aswadha Narayanan Shyam Sundar**, Dr. S. Raghavan, Mr. D. Sriram Kumar (International Conference, ICOICT 2009)
- "Implantable Antennas" – **Aswadha Narayanan Shyam Sundar**, Dr. S.Raghavan, Mr. D. Sriram Kumar (International Conference, ICOICT 2009)

**ACHIEVEMENTS AND AFFILIATIONS:**

- Peer Recognition Awards, Thermo Fisher Scientific, 2021, 2022, 2024, 2025
- Outstanding Employee Award, DCG Systems, 2015
- Bravo Award, DCG Systems, 2013, 2014 and 2015
- First place, United Nations Examination, Gulf Region
- Won Gulf Association of Indian Professionals Medal and a Certificate from the Ambassador of India
- Member, Alpha Epsilon Lambda Honor Society, Clemson University Chapter
- Member, Omicron Delta Kappa Honor Society, Clemson University Chapter
- Member, Institute of Electrical and Electronics Engineers

**SELECTED ACTIVITIES AND LEADERSHIP:**

- Member, Thermo Fisher Scientific Environmental Health and Safety Committee
- Graduate Student Mentor, Clemson University
- Member, OSUM Club, Clemson University
- Team Leader, National Service Scheme (NSS) Camp, NIT Tiruchirappalli