

Amruta Surendra Wade

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🕒 Total Experience: 7+ Years |

PROFESSIONAL SUMMARY

- 6+ years of experience in software engineering with specialization in **3D rendering**, **CAD plugin development**, and **web-based visualization**.
 - Proficient in [Babylon.js](#), **Three.js**, **Angular (version 10–16)**, **TypeScript**, **JavaScript**, **C++**, and **C#**.
 - Developed multiple **interactive 3D applications**, plugins for **SolidEdge**, **Revit**, and **Inventor**, and **SCADA integrations** using Babylon.js.
 - Strong understanding of **geometry manipulation**, **vector algebra**, **camera mechanics**, and **3D model interaction**.
 - Experienced in **Azure development** (Azure Table Storage), with exposure to full-stack architecture.
 - Adept in file formats like **.glb**, **.gltf**, **.rvt**, **.rfa**, and **.dwg**.
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TECHNICAL SKILLS

Category	Technologies
Languages	TypeScript, JavaScript, C++, C#
Web/Frameworks	Angular 10–16, HTML, CSS
3D & CAD	Babylon.js , WebXR, Three.js, Revit API, SolidEdge API, Hoops Publish, ODA
Cloud	Microsoft Azure (Table Storage)
IDEs	Visual Studio (2017–2022), VS Code
Tools	Git, Azure DevOps, Postman

PROFESSIONAL EXPERIENCE

Senior Software Developer

Datacore Technologies – Deputed at **Xerox Business Services Ltd**



 Feb 2024 – Present |  Pune, India

Tech Stack: Babylon.js, TypeScript, JavaScript, WebXR

- Developing and testing advanced 3D model rendering features for enterprise software using Babylon.js.
- Integrated **WebXR-based AR modules**, including **pen drawing**, **distance measurement**, and **persistent anchor features** for real-world interaction in augmented reality.
- Added and optimized 3D hotspots with dynamic specifications and metadata overlays.
- Enhanced interaction by aligning real-world surfaces using hit-test and anchor placements.
- Handled performance improvements and cross-platform compatibility for AR functionality.

Senior Software Developer

COPA-DATA India

 Dec 2021 – Dec 2023 |  Pune, India

Tech Stack: Babylon.js, Angular 10–14, TypeScript, JavaScript, C#

- Created 3D interactive SCADA visualizations in **Zenon** using **Babylon.js**.
 - Developed a **dashboard builder** in Angular to visualize real-time Zenon data using dynamic charts.
 - Built and maintained an **asset monitoring platform** with **multi-tenancy** support.
 - Implemented camera controls, lighting adjustments, and model transformations.
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Senior Software Developer

nCircle Tech Pvt. Ltd

 **17** Jun 2018 – Nov 2021 |  Pune, India

Tech Stack: Three.js, C++, C#, JavaScript, Revit API

- Built 3D web applications using **Three.js** for CAD duct modeling and manipulation.
 - Developed plugins for **SolidEdge**, **Revit**, and **Inventor**, including 3D PDF exports.
 - Parsed and exported **.rfa/.rvt/.dft** files into visual formats and JSON metadata.
 - Created AI-based **BIM voice assistant** using **C#** and **nAudio**.
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PROJECT HIGHLIGHTS

- ◆ **CareAr Builder Platform - Xerox** (*Babylon.js* | Feb 2024 – Present)
 - Designed and developed an interactive 3D experience platform using [Babylon.js](#).
 - Implemented **2D overlays** for hotspot placement and object interaction.
 - Optimized model loading, lighting, and camera behaviors for smooth user experience.
 - Handle 3D side of the product uploading models and anchoring.
 - **WebXR AR Tools – Pen, Measurement, Anchors**
 - Developed a Babylon.js-based **WebXR experience** with support for:
 - **Freehand drawing** using AR-enabled pen input.
 - **Distance measurement tool** using hit-test and ray-casting in AR.
 - **Anchor placement and tracking** for persistent object positioning in real-world environments.
 - Ensured compatibility with Android devices supporting ARCore and optimized for real-time interaction and performance.
- ◆ **Asset Monitoring Platform** (*Angular 16* | May 2023 – Dec 2023)
 - Designed and developed dashboards for live asset tracking.
 - Gathered requirements, built UI components, handled bug fixing and deployment.
- ◆ **Zenon 3D Visualizations** (*Babylon.js* | Dec 2021 – June 2022)
 - Integrated **3D GLB models** in Zenon ActiveX controls.
 - Configured rendering settings (camera, zoom, lighting) using Babylon.js.

- ◆ **BuildCentrix 3D CAD Viewer – Phase 1 & 2** (*Three.js* | Aug 2020 – Dec 2021)
 - Modeled CAD duct assemblies, enabled dynamic part manipulation.
 - Enhanced 3D interactivity and performance.
 - ◆ **BIM Assistant (AI/ML)** (*Revit, C#* | Jan 2020 – Apr 2020)
 - Developed voice assistant using C# and nAudio to control Revit functions.
 - ◆ **Siemens 3D Template Editor** (*C++* | Jun 2018 – Jun 2019)
 - Created a 3D PDF export module from `.dft` files using **Hoops Publish**.
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EDUCATION

CDAC (Advanced Computing)

IACSD (D.Y. Patil), Pune | 2018 | **62%**

Bachelor of Engineering (Computer Engineering)

Sanjivani College of Engineering, Kopergaon | 2016 | **68%**

H.S.C. – SMV Junior College, Yeola | 2012 | **72.12%**

S.S.C. – SMV School, Yeola | 2010 | **89.84%**

PERSONAL INFORMATION

- **Date of Birth:** 31st July, 1994
 - **Gender:** Female
 - **Languages:** English, Hindi, Marathi
 - **Current Address:** B-1101, Trimurti Elina, Near Vibgyor School, Sus-Baner, Pune – 411021
 - **Nationality:** Indian
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