

RAJ MAHATO

PIPELINE TD / PIPELINE DEVELOPER / SOFTWARE ENGINEER

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ABOUT ME

A seasoned VFX Professional / Software Engineer / Python Developer with 11+ years of professional experience in VFX industry, having evolved from **Artist** to **Pipeline Developer / Technical Director**. Specialized in backend engineering, scalable system architecture, workflow automation, and enterprise platform development. Over the last 4+ years, specialized in building high-performance Python applications, REST APIs, microservices, and large-scale data-driven systems using FastAPI, PostgreSQL.

Proven track record of architecting and leading enterprise workflow platforms supporting 400+ users and thousands of daily transactions. Experienced in backend architecture, database design, CI/CD automation, infrastructure optimization, and production support with strong focus on scalability, reliability, maintainability, and operational efficiency.

Skilled in collaborating across engineering, DevOps, operations, and business teams to deliver scalable technical solutions aligned with organizational goals. Adept at system analysis, troubleshooting, performance optimization, and long-term technical roadmap planning.

Seeking a Software Engineer / Pipeline Engineer role to contribute expertise in backend engineering, distributed systems, cloud-native architecture, and technical leadership.

Experience Summary

Pipeline Developer: 4.1 years | **VFX Artist:** 7.3 years

KEY PROJECTS

SeeFlow (Enterprise Workflow & Production Tracking Platform) – SeeCubic India Pvt. Ltd.

Replaced **ShotGrid (400+ users)** with a fully custom in-house production tracking and pipeline workflow developed from scratch.

- **Built** an end-to-end pipeline integration connecting **SeeFlow, Nuke, and SilhouetteFX** via **FastAPI**, automating artist workflows and interdepartmental publishing processes.
- **Engineered** a suite of **ShotGrid-like Nuke/SilhouetteFX utilities** (Write node, Loader, Publisher, Plate update checks), improving production efficiency and reducing daily workflow and publish **errors** to nearly **0%**.
- **Co-designed** an intuitive **web interface** for **SeeFlow** and contributed to **PostgreSQL schema and database architecture** to ensure scalability and efficient data management.

SeeTrack (Time Tracking & Analytics Ecosystem) – SeeCubic India Pvt. Ltd.

Developed a **production time-tracking and task management ecosystem** to monitor artist activity and optimize resource utilization across departments.

- **Built** a custom time-tracking system from scratch and integrated it seamlessly with **SeeFlow**, enabling automatic tracking of task durations and user activity.
- **Implemented a software launcher** within **SeeTrack** to initiate assigned applications (e.g., *Nuke, SilhouetteFX*) directly from the task interface, ensuring consistent environment setup.
- **Developed** task state management with statuses such as *In Progress, Idle, Rendering, IT Issues* and integrated timers to accurately record time spent on each task.
- Added **real-time dashboards** and analytics to visualize task progress, artist utilization, and project-level time distribution within the ecosystem, improving scheduling and productivity insights.

TECHNICAL SKILLS

Pipeline Development

- **Design, develop, and maintain tools** for Nuke, SilhouetteFX, RV, Maya, and other DCC software. Also, standalone production support tools like Ingest, Client Delivery and other using Python (2/3), MEL, C++, CSS, PostgreSQL.
- **Integrate, test and create UI based tools/launchers** for AI-driven VFX tools such as *NetFlix/Void, NukeDepthCrafter, NukeSamurai, Depth Anything, DepthCrafter ComfyUI, Diffuseraser* and more.
- **Troubleshoot and debug issues reported by** Artists, Leads, and Supervisors **on both in-house and DCC-specific tools**.
- **Handle** show setup (Ingestion/Client Delivery) and **automation** within SeeFlow/ShotGrid and other DCCs.
- **Developed** SeeFlow/ShotGrid Desktop and Web-based tools **for pipeline integration**.
- **Create efficient and visually appealing** UI/UX designs using Qt Designer, PySide (2/6), PyQt (5/6).
- **Maintain/Update/Release codes** in version-controlled system using Git, GitHub repositories.
- **Support** IT, Render Wrangler, IO Team with pipeline setup, render error troubleshoot and training accordingly.

Visual Effects

- **Skilled in** Wire/Rope/Marker Removal, Clean Plate Creation, Paint Fixes, Grain/Color Matching, Keying, BG Prep, Stereo Paint, Dust Removal, and Native Eye VFX Paint.
- **Expertise in** Nuke Gizmology, Stereo Conversion (2D–3D), Element Pass Compositing.

Software Proficiency

- **Compositing & Paint:** Nuke, SilhouetteFX, Fusion, Mocha, Adobe Photoshop
- **3D & Design:** Maya, Houdini, Unreal Engine, ZBrush, Adobe Illustrator, Figma | **Editing:** Premiere Pro, After Effects
- **Development:** Python, MEL, C++, HTML, CSS, Git, Visual Studio Code

Project Management Systems

SeeFlow | ShotGrid | AYON | MSI | Flux | Flow | Rez

Render Farms

Deadline | Muster | Fox

Operating Systems

Linux | Windows | MacOS

WORK EXPERIENCE

Pipeline TD

SeeCubic India Pvt. Ltd, Pune — April 2024 – Present (2.2 years)

- **Develop and maintain** in-house tools and plugins to streamline production workflows.
- **Complete project setups** through ingestion to client delivery.
- **Gather requirements and develop tools** for Nuke, Silhouette and other DCCs using Python.
- **Design and connect** Qt-based GUIs using PySide/PyQt for custom tools.
- **Conduct R&D** on existing tools to enhance user experience and add new features.
- **Monitor and troubleshoot issues** on render farms (Deadline) to ensure smooth rendering and other jobs.
- **Development Projects -**
 - **SeeFlow & SeeTrack:** Built a full in-house production and time-tracking system **replacing ShotGrid for 400+ users**, with deep **Nuke/SilhouetteFX/OpenRV** pipeline integration, automated publishing, and real-time analytics to boost efficiency and accuracy.
 - **Count Sheet Discrepancy Finder:** Compares client reel data and **ShotGrid/SeeFlow** project data(Ingested shot) to flag **changes/discrepancy**(Frame Range/Shot Status/Addition or deletion of shots in latest reel turnover) with Production Head/Managers, this reduces the manual sanity sheet checks to almost 0%.
 - **AI Tool Integration/Testing:** Integrate and test **AI-based tools** including *NukeDepthCrafter, NukeSamurai, ComfyUI, Depth-Anything* also standalone Object clean-up tools like *Diffuser, VideoPainter, Rose*; depth generators like *DepthCrafter, DepthAnything-2, Video-depth-anything* and more.
 - **RV Extended: OpenRV** integration with **SeeFlow/ShotGrid** and UI based Review tool (RV Launcher) for Supervisors/Leads/Artists, that allows user to input Shot number(s) and play related published media, compare inter and intra-departmental versions.
 - **Developed/Migrated** existing Ingestion, Client Delivery and workflow tools for **SeeFlow** from **ShotGrid**.

Jr. Pipeline TD

Fractal Pictures, Mumbai — Oct 2022 – March 2024 (1.5 years)

- **Developed and maintained** custom tools and plug-ins to optimize studio workflows.
- **Built and deployed** ShotGrid-based web tools for production management.
- **Created pipeline utilities** for Maya, Nuke, NukeStudio, and Houdini using Python, MEL.
- **Supported render wrangler** by troubleshooting rendering and publishing issues on Muster and Deadline render farms.
- **Designed tool** interfaces using QT Designer and implemented GUI functionality via PySide/PyQt.
- **Enhanced** existing in-house tools through continuous R&D and user feedback.
- **Development Projects -**
 - **Nuke Shot Builder:** It takes a master nuke file with multiple lighting passes, DMP renders, Clean plates and with only parsing/changing the shot name it re-maps all the available passes in same context for the given shot. Helps artists to save time on importing similar plates and LD nodes etc.
- **Credited** in *IC814 (Netflix), Adipurush (2023)* — Feature Film, Pipeline Department.

Pipeline Developer (Trainee)

Phantom FX, Chennai — April 2022 – Oct 2022 (6 months)

- **Assisted in developing and maintaining** in-house tools and plug-ins for various DCCs (Maya, Nuke, Fusion, Natron).
- **Developed** UI tools using QT Designer, PySide/PyQt, and backend systems in Python.
- **Collaborated with senior developers** to improve tool performance and usability.
- **Development Projects -**
 - **AOV Render Tool:** UI Based AOV selection tool that renders turntable passes in Maya and makes a contactsheet of that in Natron.
- **Credited** in *Vikram (2022)* — Feature Film, Technology Department.

Paint/Prep Artist (VFX Paint)

Anibrain (JV with Framestore), Pune — July 2021 – April 2022 (9 months)

- Delivered high-quality VFX paint/prep work including **wire & rig removal, clean-plate creation, and tracking**.
- **Software:** Nuke, Silhouette, Photoshop, Mocha.
- **Projects:** *Fantastic Beasts: The Secrets of Dumbledore, The Witcher (Season 2)*, and other feature films & TV series.

Paint/Prep Artist (VFX/Stereo Paint)

Legend 3D, Pune — Jan 2019 – July 2021 (2.6 years)

- **Responsible** for VFX paint, native eye paint, cleanup, and prep tasks.
- **Software:** Nuke, Silhouette, Mocha.
- **Projects:** *Spider-Man: No Way Home, Shang-Chi, Black Widow, Gemini Man*, and various Hollywood/Bollywood production

Paint/Prep Artist (VFX Paint)

Anibrain (JV with Framestore), Pune — Feb 2018 – Jan 2019 (1 year)

- Performed cleanup and compositing tasks on major film and TV projects.
- Software: Nuke, Silhouette, Photoshop, Mocha.
- Projects: *Christopher Robin*, *Fantastic Beasts*, and other Framestore (London/Montreal) productions.

Sr. Paint/Prep Artist (VFX Paint)

Rotomaker India Pvt. Ltd., Hyderabad — Oct 2017 – Feb 2018 (5 months)

- Worked on high-end paint/prep tasks for major feature films and TV shows.
- Projects: *Supergirl*, *The Flash*, *Justice League*, *Black Panther*, and others.

Paint/Prep Artist (Stereoscopy Paint)

Prime Focus World (PFAMES), Goa — Nov 2016 – Sept 2017 (11 months)

- Created stereo paint and clean-plates for 3D feature film conversions.
- Software: Nuke, Fusion, Silhouette, Photoshop, Mocha, PFTrack.
- Projects: *Pirates of the Caribbean*, *Jumanji 2*, *Wonder Woman*, and others

Stereo Compositor (Depth Artist)

Digicaptions India Pvt. Ltd. (Deluxe), Pune — Jan 2015 – Nov 2016 (1.11 years)

- Handled stereo conversion and depth compositing for feature films.
- Software: Nuke
- Projects: *Star Wars*, *xXx*, *Fantastic Beasts*, *Avengers*, *Ant-Man*, and more

EDUCATION

B.Sc in Multimedia & Animation

Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu | 2010 – 2013

Arena Animation Academy Specialist Program (AAASP)

Arena Animation, Ranchi, Jharkhand | 2010 – 2013

Intermediate(10+2) (Mathematics & Computer Science)

D.A.V. Model School, CFRI, Jharkhand | 2008 – 2010

ADDITIONAL LEARNING & CERTIFICATIONS

The Modern Python 3 Bootcamp — UdeMy

[View Credential](#)

Digital Skills: User Experience — Accenture | FutureLearn

[View Credential](#)

Adobe XD – UI/UX Design & Prototyping — UdeMy

[View Credential](#)

AZ-400: Development for Enterprise DevOps — Microsoft Learn

[Show Credential](#)

AZ-400: Implement CI with Azure Pipelines and GitHub Actions — Microsoft Learn

[Show Credential](#)

ADDITIONAL INFORMATION

- Comfortable working in Agile and collaborative engineering environments.
- Strong problem-solving and analytical skills with production support experience.
- Experience working across Linux, Windows, and macOS environments.
- Open to Software Engineering, Pipeline Engineering, DevOps, Backend Engineering, Platform Engineering, and Distributed Systems roles.

I hereby declare that all the information given above is correct to the best of my knowledge and belief.

Date:

Place: Pune

Raj Mahato
(Signature)