# Julian V V Ceipek

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Remote/Hybrid - Boston, MA

I craft systemic solutions with & for people. Software that's usable, extensible, fast.
I love learning, collaborating & teaching.

EMPLOYMENT

2020-2023 **Lumafield.** *Senior Software Engineer (5-11/2023), Software Engineer (6/2021-5/2023), Contractor (12/2020-6/2021).* Developed critical solutions – volumetric renderers, touchscreen interfaces, hardware drivers, embedded software, firmware, and server backends – that empower manufacturers with the affordable and accessible X-ray vision they need to create more reliable, cheaper, more sustainable products.
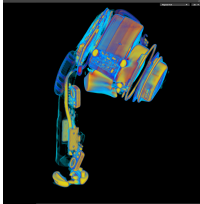
- Enabled Lumafield's expansion into new market segments with high-volume inspection requirements; combining systemic redesigns with low-level SIMD optimizations to reduce X-ray scan times from hours to minutes while increasing data quality.
- Helped customers save hundreds of thousands of dollars by creating the core WebGL2 renderer they use to inspect products and prototypes for internal defects.
- Led 75% variable cost reduction project to move the 3d reconstruction pipeline from AWS servers to on-scanner CPU+GPU compute for high-volume customers.

2020-2021 **Lynxtool.** *Founding Engineer.* Created Pixar-inspired technologies to visualize the hidden workings of spreadsheets with a friendly web-based programming tool. Company acquired by Figma, then Adobe.

- Designed, implemented, and documented an in-browser rendering engine and user interface toolkit optimized for Lynxtool's unique layout and interaction requirements.
- Enabled users to seamlessly view and edit million-row datasets in the browser by extending Lynxtool's LLVM compiler backend with recording and on-demand data streaming.
- Collaboratively designed and implemented new user interface paradigms for viewing and editing intermediate calculations.

2019-2020 **Dark.** *Engineer.* Led initiatives to unify user experience of revolutionary "live" programming environment for backend programmers, with goal of making coding 100x easier.

- Developed, documented, and tested standard toolkit with which customers build software used by tens of thousands of end users.
- Eliminated the biggest drain on developer resources by re-architecting Dark's unique structured code editor to consistently match user expectations.
- Coached early adopters through coding their first Dark programs over video calls, identified customer pain points through regular interactions, and implemented features and fixes to address their needs.

2015-2019 **Tender Claws.** *Tech Co-lead.* Created foundational game systems, in-house tools, native plugins, custom servers, and prototypes for critically-acclaimed AR and VR experiences supported by Google and Oculus.

- Developed prize-winning first prototype and core multiplatform architecture for award-winning VR game Virtual Virtual Reality, with 50k+ installs and majority 5-star ratings.
- Spearheaded and led development of multiplayer services and backend infrastructure for virtual reality live theater experience showcased at Sundance Film Festival and backed by Oculus.
- Amplified the efforts of my talented collaborators; learning, using, and teaching languages, techniques, and pre-release technologies as needed.

2015-Present **Studio Farahi.** *Software Contractor.* Create the "brains" for interactive garments and installations backed by Adidas, Steelcase, and Chicago's Museum of Science and Industry; and featured by outlets including WIRED, CNN, The Guardian, BBC News, Engadget, and CNET.
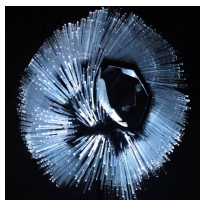
- In under 130 hours, engineered complete simulation suite, control system, and wifi monitoring portal for display case that reacts to human emotions. Project presented to executives at Adidas headquarters.
- Built visual calibration tool for 30 second servo motor tuning (despite no prior servo experience).
- Achieved 20x performance boost for generative animations using game development tricks.

2014-Present **Entrepreneur.** *Co-founder & Tech Lead.* Co-designed and developed multiplayer arcade game featured at the highly selective E3 Indiecade Showcase.

2013 **Codecademy.** *Engineer Intern.* Designed, developed, and user-tested the initial prototypes for the project-based programming lessons that are now central to the company's subscription model.

2012 Riparian Data. *Developer/Designer Intern.* Developed production code for browser-based enterprise email client and co-designed the user experience.

2011 Lexis Nexis. *User Experience Research Intern.* First to integrate speech recognition into iPhone app for lawyers.

EDUCATION

2014-2017 USC School of Cinematic Arts, Los Angeles, CA
GPA 3.93. MFA in Interactive Media and Game Design

2010-2014 Franklin W. Olin College of Engineering, Needham, MA
GPA 3.93. BS in Engineering with a computing concentration

NOTABLE ACHIEVEMENTS

Tendar [link]
Winner, Innovation in Interaction, IndieCade 2018 | Official Selection, Sundance New Frontiers 2018 | Official Selection, IDFA Doc Lab 2018

Virtual Virtual Reality [link]
Best VR Game, International Mobile Gaming Awards 2018 | Best VR Experience, Google Play Awards 2017 | Best Mobile Interactive Experience, Raindance Film Festival 2017

Awarded USC Annenberg Graduate Fellowship

1st place for educational video, Ars Science Video Contest, physical sciences division [link]

1st place award for 3d model, Weta Workshop (SFX group for Avatar and Lord of the Rings) [link]

Lead antagonist in first authorized stage adaptation of Dr. Horrible's Sing-Along Blog

DIGITAL TOOLS

Primary prototyping languages: TypeScript and Python.
Developed non-trivial programs in C#, Go, C, Objective-C, OCaml, Odin, LISP, SML, MATLAB, BASIC, JavaScript, Java, and LabView. Often experiment with new languages.

Adept with Unity, Inkscape, Blender, Final Cut Pro, and Photoshop for 5+ years.