## CV: Fredrik Präntare

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## Summary

I am a game director and CEO with a strong background in computer science and game development. My contributions to artificial intelligence and computer games have earned me several awards, including the Lilla Polhemspriset and the Young Entrepreneur of the Year. As an entrepreneur, I co-founded two of Östergötland's leading game development companies: Dimfrost Studio AB (fully acquired by Nasdaq-listed Maximum Entertainment in 2020) and Pugstorm AB (privately held). Additionally, I was an invited researcher at Stanford University's algorithmic game theory lab, and I am the game director of Core Keeper, a game that boasts over two million players.

In my spare time, I enjoy creating art, games, and music. I also have a penchant for creative writing and weightlifting, and am a former Grandmaster in the real-time strategy game StarCraft II.

## Select Awards (2017–present)

**2023 Young Entrepreneur of the Year** — The №1 entrepreneurial award in Sweden, honoring the top entrepreneur under 35 in Linköping, Östergötland, and across the nation:

"An enthusiastic and inspiring leader who has an unyielding faith in the team and everyone's desire to contribute. He has built the company from the ground up and actively recruited the team that today contributes to the company being at the absolute forefront through technical development and innovation. A young entrepreneurial star who already shines brightly."

- **2023 Gamescom's Most Entertaining Game Nomination** Core Keeper, a game I developed together with the team at Pugstorm, was among 6 finalists for the "Most Entertaining" award at the world's largest game conference *Gamescom*.
- 2023 Best Debut at Swedish Game Awards Received for Core Keeper together with my team.
- **2022 Golden Joystick Award Nomination** Core Keeper, a game I developed together with the team at Pugstorm, was nominated to being the world's best early access game of 2022.
- **2022 TIGA Best Social Game Award** Received for Core Keeper together with my team.
- **2022 Outstanding Studio Award** Awarded by the company *Ericsson* to my company *Pugstorm* (which I founded) for being 2022's most prominent game development studio in Östergötland.
- **2021 Outstanding Studio Award** Awarded by the company *Ericsson* to the company *Dimfrost Studio* (which I co-founded) for being 2021's most prominent game development studio in Östergötland.
- **2020** Best Student Paper at PRIMA Awarded for my research in AI and computer science.
- **2018** Lilla Polhemspriset Awarded by Sveriges Ingenjörer for writing 2018's best MSc thesis in Sweden.
- **2018** Best Student Paper at PRIMA Awarded for my research in Al and computer science.
- **2017** Best Research Potential CAwards Awarded for my work in realtime computer graphics.

## **Work Experience**

2016–present Pugstorm — Founder, Chief Executive Officer (CEO), Board Member, and Creative Director

- As the CEO of Pugstorm, I am responsible for overseeing all aspects of the company's operations and strategy, including business development, finance, and product development.
- As the Creative Director, I am responsible for overseeing the creative aspects of game development, including managing the teams and ensuring that the games adhere to our company's vision and artistic direction. I play a crucial role in shaping the overall look, feel, and gameplay of our games, making key creative decisions to ensure their success.
- I have successfully grown the company from a small startup consisting only of me and my friends, to a profitable and well-respected player in the gaming industry.

2020–2022 **Linköping University** — Member of the PhD Council at the Department of Computer and Information Science

2017–2022 Linköping University — Teacher

• I was responsible for the courses: "TDDD95 - Advanced Algorithmic Problem Solving" (PhD/MSc course), "TDDE13 - Multiagent Systems" (MSc course), "TDDE25 - Perspectives in Computer and Software Technology", and "TDDD92 - Project in Artificial Intelligence".

2017–2022 Dimfrost Studio AB — Co-Founder, Board Member, and Game Director

- Driving force behind the creative direction and development of Bramble: The Mountain King, and involved in all aspects of the game's design and development.
- Communicated with all team leads to troubleshoot and solve issues, and was responsible for making many of the game's design decisions.
- Coordinated the team to ensure the project stayed on track and aligned with its goals and vision.
- The studio was fully acquired by Maximum Ent., a company listed on Nasdaq Nordic, in 2020.

2017 Intel Corporation — Intel Student Ambassador in Artificial Intelligence and Deep Learning

2017 Paradox Interactive — Master Thesis Student in Artificial Intelligence

- I developed and implemented multi-agent coordination algorithms for the commercial strategy game Europa Universalis 4 to improve the game's Al players.
- This work was awarded Lilla Polhemspriset 2018 for best Swedish thesis by Sveriges Ingenjörer, and subsequently Best Student Paper Award at PRIMA 2018.

2015–2016 Linköping University — Teaching Assistant

### **Education**

2018–2024 Linköping University — Doctor of Philosophy - PhD, Computer Science

- As a PhD student in computer science and artificial intelligence at Linköping University, I am
  working closely with Professor Dr. Fredrik Heintz on a range of research topics within the field of
  algorithmic game theory and multi-agent systems.
- I am part of the prestigious WASP program, which is funded by the Wallenberg Foundation.
- I am exploring the use of combinatorial optimization, heuristic and probabilistic search techniques, and deep learning algorithms to coordinate the actions and strategic decision-making of agents in complex systems.

- My work has implications for a range of applications, including strategy games and other multiagent scenarios.
- 2020 Stanford University Visiting PhD Student Researcher at the Algorithmic Game Theory Lab
  - I worked on research related to algorithmic game theory and artificial intelligence under the supervision of professor Dr. Aviad Rubinstein.
- 2016–2017 Linköping University Master's Degree, Engineering and Computer Science (GPA 4.9/5.0)
- 2012–2015 Linköping University Bachelor's Degree, Computer Science
- 2011–2012 Umeå University Courses, Mathematics and Computer Science

# **Select Projects**

#### 2022 Core Keeper — Game Director

- As the game director of Core Keeper, I was ultimately responsible for the game's overall design, direction, and vision.
- The game is an RPG adventure game in which players explore an endless cavern of creatures, relics, and resources in a mining sandbox adventure.
- It was released on PC/Steam in early access and has sold over two million units, generating over 10 million USD in revenue in a few months.
- It received praise for being one of the best sandbox games ever by some of the most renowned reviewers in the games industry, including both Polygon and PCGamer.
- It received several prestigious awards, including TIGA for best social game, Best Debut at the Swedish Game Awards, and a Golden Joystick nomination.
- https://store.steampowered.com/app/1621690/Core\_Keeper/

#### 2023 Bramble: The Mountain King — Game Director

- As the game director for Bramble: The Mountain King, I was responsible for driving the game's creative direction and coordinating the development team to ensure that the project stayed on track and aligned with its goals and vision.
- Set in a world inspired by Swedish folklore, the game follows a young boy on a quest to save his sister from the Mountain King.
- https://store.steampowered.com/app/1623940/Bramble The Mountain King/

#### 2020 Radical Rabbit Stew — Game Director

- As the main developer of Radical Rabbit Stew, I was responsible for the game's programming, design, audio, and creative direction.
- The game is an action-arcade game with fast-paced gameplay, puzzles, and boss fights. It features vibrant pixel art and a retro-inspired soundtrack.
- The game was released on all major platforms: PC, Xbox, PlayStation, and Nintendo Switch.
- https://store.steampowered.com/app/1232010/Radical\_Rabbit\_Stew/

### **Select Publications**

- 2022 **F. Präntare**, "Dividing the Indivisible: Algorithms, Empirical Advances, and Complexity Results for Value-Maximizing Combinatorial Assignment Problems", PhD Thesis, 2024.
- 2022 **F. Präntare**, G. Osipov, and L. Eriksson, "Concise Representations and Complexity of Combinatorial Assignment Problems", in *Proceedings of the 21st International Conference on Autonomous Agents and Multi-Agent Systems* (AAMAS), 2022.
- 2022 **F. Präntare**, H. Appelgren, M. Tiger, D. Bergström, and F. Heintz, "Learning Heuristics for Combinatorial Assignment by Optimally Solving Subproblems", in *Proceedings of the 21st International Conference on Autonomous Agents and Multi-Agent Systems* (AAMAS), 2022.
- 2021 **F. Präntare**, H. Appelgren, and F. Heintz, "Anytime Heuristic and Monte Carlo Methods for Large-Scale Simultaneous Coalition Structure Generation and Assignment", in *Proceedings of the AAAI Conference on Artificial Intelligence* (AAAI), vol. 35, no. 13, pp. 11317-11324, 2021.
- 2020 F. Präntare and F. Heintz, "An Anytime Algorithm for Optimal Simultaneous Coalition Structure Generation and Assignment", Autonomous Agents and Multi-Agent Systems (JAAMAS), vol. 34, no. 1, 2020.
- 2020 **F. Präntare** and F. Heintz, "Hybrid Dynamic Programming for Simultaneous Coalition Structure Generation and Assignment", in *International Conference on Principles and Practice of Multi-Agent Systems* (PRIMA), 2020.

### References

Available upon request.