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Live Course Proposal

Title: Developing with AI Agent Swarms
Subtitle: Agentic software development with claude-flow

Contacts

Instructor Name: James Urquhart
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Phone: +1-510-908-1224
Timezone: Pacific
Mailing Address: 3208 Fairview Avenue, Alameda, CA, 94501

Are you a returning or new instructor? New instructor, returning author

Acquisitions Editor to Complete:

Acquisitions Editor: Louise Corrigan
Instructional Designer: XXXXX

Role: Software Developer, Senior Software Developer, Software Architect

Level:

- ☐ Beginner
- ☑ Intermediate
- ☐ Advanced

Skills: The basic concepts behind agent swarming using claude-flow, an emerging but highly promising technology

Timing and Scheduling

Indicate below the planned number of days per course, the duration of each day, and then the total duration (all days combined).

Number of day(s) per course: 1 (almost always 1)

Duration per day: 3 hours (max 4 hours)

Total Duration: 3 hours

Instructor's general availability in Pacific Time (mornings PT are optimal)

- 9AM-3PM M-F

To be completed by Production and Editorial during scheduling:

Initial event dates

- XXXXX
- XXXXX

Materials due date

- XXXXX 4 weeks prior to the event date
- **Recommended slide template**

Course Information

Supporting Technologies

ON24 Tools *Please check the box next to each supporting feature you plan to use.*

- ☑ **Chat**: Encourage learners to learn from each other and communicate directly with you, the instructor.
- ☑ **Q&A widget**: Direct learners to input questions into this widget so that they're easy for you to address.
- ☑ **Polls**: Ask learners for responses to a multiple-choice question. The poll tool displays the responses (in %) to the entire group.
- ☑ **Pulse checks**: Prompt learners for a thumbs up/down response to any question.
- ☑ **Screen sharing**: Live-code, demo, and walk through exercises.
- ☑ **Whiteboarding**: Annotate slides, draw out a concept, or take answers from the class and keep a list going.
- ☑ **Resource downloads:** GitHub repo(s), worksheets, etc.

- ☐ **JupyterHub notebooks:** Note: Please be aware that O'Reilly currently does not host new Jupyter Notebooks on our platform. Instructors are responsible for sharing all files (via link in Course Preparation) with learners to download and run locally to their machines while you screen share your own local notebook. This helps avoid any startup issues and delays during the course.
- ☐ **Sandbox Environment:** Sandboxes provide an in-browser environment already set up for learners to learn and explore. You can see available Sandboxes on O'Reilly Learning here.

Does this course have any other specific technical needs? *Please detail below.*

Course Registration Page Information

Note: The highlighted information below will be included in the course registration page for users to determine if the course is a good fit for their needs. It will be copyedited for grammar and clarity.

Course Description

If agentic AI is changing the way we build software, then agent swarms are reimagining it. In this course, we explore Agentic AI swarms and similar patterns, discuss the ways that different patterns can be applied to development, and take a look at one particular open source framework, `claude-flow`, to see how these patterns can be put into practice. We will also explore the limits of current frameworks, and the discipline required to make agentic swarms work for real software projects.

This course covers an experimental framework for parallel agent processing, and is not intended for production use. The course aims to teach the basic concepts behind this emerging, but highly promising, technology. It does not intend to be a comprehensive guide to applying the technology for any specific use case.

Course Objectives

- Understand what differentiates AI swarms from linear AI developer workflows
- Understand the patterns in parallel AI software development approaches, and where to use each one
- Install and run a first prompt with claude-flow in VCode.

Target Audience

- You're a software developer, architect, or product manager
- You wish to apply AI to your development process to achieve better outcomes
- You want to see first hand how frameworks like claude-flow change the ways software development is done

Prerequisites

- Basic knowledge of Anthropic Claude, claude-code, and using AI to build applications

Course Preparation Is there any setup learners should do before the class starts? This could include things like having an IDE ready with certain libraries installed, or a dataset to use in an exercise.

- TBD

Course Follow-Up Links to content in our platform for further learning. Search here.

- TBD

Course schedule

Section 1: Agentic AI and Swarm Basics (60 minutes)

1. Intro and course overview
2. What is multi-agent AI
    1. General definition
    2. Types and use cases
        1. Types from Google and/or Agentic Foundation documentation
        2. Use cases/usage from same docs, if available
    3. Why focus on Swarms and Hive/Coordinator patterns?
        1. Unique ability to define own workflows and rules
        2. Can innovate solutions iteratively
        3. Frameworks are already available with this in mind
            1. Claude/ChatGPT
            2. Agentic Foundation (claude-flow, agentdb, etc)

Section 2: Swarm instantiation and exploration (60 minutes)

1. Simple version (claude-code and Claude agents)
    1. Step through how claude agents work
    2. Run example prompt
    3. Explain what is happening and answer questions

2. More complex version (claude-flow and supporting tools)
    1. Step through Agentic Foundation suite
    2. Run example prompt for swarm
    3. Run example prompt for hive
    4. Explain what is happening and answer questions

Section 3: Best Practices for Using Swarms (60 minutes)

1. When NOT to use swarms/hives/etc
2. Iteration on long running agent systems
3. Other

Instructor Information

Bio

James Urquhart is Principal at Urquhart Strategic Solutions. Mr. Urquhart is a seasoned technologist with over 30 years of experience in distributed systems development, deployment, and operations, focusing on software as a complex adaptive system, cloud computing, and automation. Prior to founding his own consultancy, Mr. Urquhart held leadership roles at VMware, Pivotal Software, AWS, SOASTA, Dell, Cisco, Cassatt, Sun Microsystems, and Forte Software.

Mr. Urquhart is the author of the influential Flow Architectures: The Future of Streaming and Event-Driven Integration (Oreilly, 2021), which lays out a roadmap for event-driven integration through standardized interfaces and protocols. He was also named one of the ten most influential people in cloud computing by both the MIT Technology Review and the Huffington Post as a former contributing author to GigaOm and CNET. Mr. Urquhart brings a deep understanding of disruptive technologies and the business opportunities they afford.

Mr. Urquhart graduated from Macalester College with a Bachelor of Arts in Mathematics and Physics.

Company affiliation

Urquhart Strategic Solutions (https://uss.jamesurquhart.com)

Social media URLs

Primary website	https://uss.jamesurquhart.com

Twitter	
LinkedIn	https://www.linkedin.com/in/jurquhart/
GitHub	https://github.com/jamesurquhart
YouTube	https://www.youtube.com/@jamesurquhart1376
Other	

Video samples of you engaged in teaching

- Promise Theory in Wardley Mapping
- Keynote: Complex Adaptive Systems
- Event-Driven Integration Today & Tomorrow • James Urquhart • GOTO 2023

Testimonials such as praise from previous clients or glowing tweets

- XXXXX
- XXXXX
- XXXXX

Instructor photo

- See our guide to taking a good headshot.
- Format: JPG or PNG, ideally high-res, near 1400x1400 pixels (original files are best)
- Please add a link to your headshot(s) here (Dropbox, Google Drive, etc.) or email files directly to your editor or event producer.
- **Do not paste photos in this Google Doc.** (We can't use them!)