

(51) International Patent Classification:
G06V 10/58 (2022.01)(21) International Application Number:
PCT/US2022/036828(22) International Filing Date:
12 July 2022 (12.07.2022)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
17/383,293 22 July 2021 (22.07.2021) US
17/811,766 11 July 2022 (11.07.2022) US(71) Applicant: **X DEVELOPMENT LLC** [US/US]; 1600
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(54) Title: AUTOMATED DETECTION OF CHEMICAL COMPONENT OF MOVING OBJECT

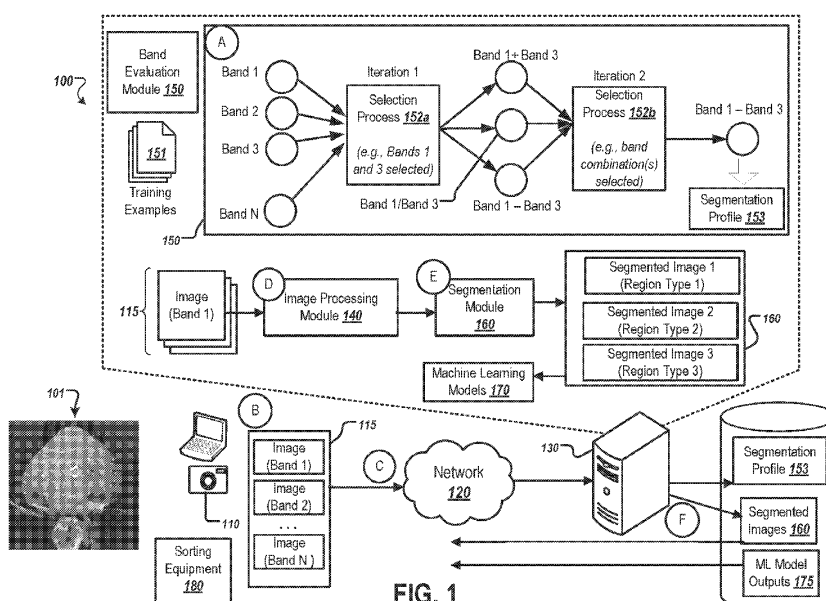


FIG. 1

(57) **Abstract:** Image data is obtained that indicates an extent to which one or more objects reflect, scatter, or absorb light at each of multiple wavelength bands, where the image data was collected while a conveyor belt was moving the object(s). The image data is preprocessed by performing an analysis across frequencies and/or performing an analysis across a representation of a spatial dimension. A set of feature values is generated using the image preprocessed image data. A machine-learning model generates an output using the feature values. A prediction of an identity of a chemical in the one or more objects or a level of one or more chemicals in the object(s) is generated using the output. Data is output indicating the prediction of the identity of the chemical in the object(s) or the level of the one or more chemicals in at least one of the one or more objects.

[Continued on next page]

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(81) **Designated States** (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- with amended claims (Art. 19(1))

Date of publication of the amended claims:

16 March 2023 (16.03.2023)